

Tools for a Safety and Health Program Assessment

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INTRODUCTION

There are three basic methods for assessing safety and health program effectiveness. This discussion will explain each of them. It also will provide more detailed information on how to use these tools to evaluate each element and subsidiary component of a safety and health program.

The three basic methods for assessing safety and health program effectiveness are:

- Checking documentation of activity;
- Interviewing employees at all levels for knowledge, awareness, and perceptions; and
- Reviewing site conditions and, where hazards are found, finding the weaknesses in management systems that allowed the hazards to occur or to be "uncontrolled."

Some elements of the safety and health program are best assessed using one of these methods. Others lend themselves to assessment by two or all three methods.

Documentation

Checking documentation is a standard audit technique. It is particularly useful for understanding whether the tracking of hazards to correction is effective. It can also be used to determine the quality of certain activities, such as self-inspections or routine hazard analysis.

Inspection records can tell the evaluator whether serious hazards are being found, or whether the same hazards are being found repeatedly. If serious hazards are not being found and accidents keep occurring, there may be a need to train inspectors to look for different hazards. If the same hazards are being found repeatedly, the problem may be more complicated. Perhaps the hazards are not being corrected. If so, this would suggest a tracking problem or a problem in accountability for hazard correction.

If certain hazards recur repeatedly after being corrected, someone is not taking responsibility for keeping those hazards under control. Either the responsibility is not clear, or those who are responsible are not being held accountable.

Employee Interviews

Talking to randomly selected employees at all levels will provide a good indication of the quality of employee training and of employee perceptions of the program. If safety and health training is effective, employees will be able to tell you about the hazards they work with and how they protect themselves and others by keeping those hazards controlled. Every employee should also be able to say precisely what he or she is expected to do as part of the program. And all employees should know where to go and the route to follow in an emergency.

Employee perceptions can provide other useful information. An employee's opinion of how easy it is to report a hazard and get a response will tell you a lot about how well the hazard reporting system is working. If employees indicate that the system for enforcing safety and health rules and safe work practices is inconsistent or confusing, you will know that the system needs improvement.

Interviews should not be limited to hourly employees. Much can be learned from talking with first-line supervisors. It is also helpful to query line managers about their understanding of their safety and health responsibilities.

Site Conditions and Root Causes of Hazards

Examining the conditions of the workplace can reveal existing hazards. But it can also provide information about the breakdown of those management systems meant to prevent or control these hazards.

Looking at conditions and practices is a well established technique for assessing the effectiveness of safety and health programs. For example, let's say that in areas where PPE is required, you see large and understandable signs communicating this requirement and all employees -- with no exceptions -- wearing equipment properly. You have obtained valuable visual evidence that the PPE program is working.

Another way to obtain information about safety and health program management is through root analysis of observed hazards. This approach to hazards is much like the most sophisticated accident investigation techniques, in which many contributing factors are located and corrected or controlled.

When evaluating each part of a worksite's safety and health program, use one or more of the above methods, as appropriate.

The remainder of this discussion will identify the components found in each element of a quality safety and health program and will describe useful ways to assess these components.

1. Assessing the Key Components of Leadership, Participation, and Line Accountability

- WORKSITE POLICY ON SAFE AND HEALTHFUL WORKING CONDITIONS

Documentation

If there is a written policy, does it clearly declare the priority of worker safety and health over other organizational values, such as production?

- Interviews

When asked, can employees at all levels express the worksite policy on worker safety and health?

If the policy is written, can hourly employees tell you where they have seen it?

Can employees at all levels explain the priority of worker safety and health over other organizational values, as the policy intends?

- Site Conditions and Root Causes of Hazards

Have injuries occurred because employees at any level did not understand the importance of safety precautions in relation to other organizational values, such as production?

- GOAL AND OBJECTIVES FOR WORKER SAFETY AND HEALTH

- Documentation

If there is a written goal for safety and health program, is it updated annually?

If there are written objectives, such as an annual plan to reach that goal, are they clearly stated?

If managers and supervisors have written objectives, do these documents include objectives for the safety and health program?

- Interviews

Do managers and supervisors have a clear idea of their objectives for worker safety and health?

Do hourly employees understand the current objectives of the safety and health program?

- Site Conditions and Root Causes of Hazards (Only helpful in a general sense.)

- VISIBLE TOP MANAGEMENT LEADERSHIP

- Documentation

Are there one or more written programs which involve top-level management in safety and health activities? For example, top management can receive and sign off on inspection reports either after each inspection or in a quarterly summary. These reports can then be posted for employees to see. Top management can provide "open door" times each week or each month for employees to come in to discuss safety and health concerns. Top management can reward the best safety suggestions each month or at other specified intervals.

- Interviews

Can hourly employees describe how management officials are involved in safety and health activities?

Do hourly employees perceive that managers and supervisors follow safety and health rules and work practices, such as wearing appropriate personal protective equipment?

- Site Conditions and Root Causes of Hazards

When employees are found not wearing required personal protective equipment or not following safe work practices, have any of them said that managers or supervisors also did not follow these rules?

- EMPLOYEE PARTICIPATION

- Documentation

Are there one or more written programs that provide for employee participation in decisions affecting their safety and health?

Is there documentation of these activities; for example, employee inspection reports, minutes of joint employee-management or employee committee meetings?

Is there written documentation of any management response to employee safety and health program activities?

Does the documentation indicate that employee safety and health activities are meaningful and substantive?

Are there written guarantees of employee protection from harassment resulting from safety and health program involvement?

- Interviews

Are employees aware of ways they can participate in decisions affecting their safety and health?

Do employees appear to take pride in the achievements of the worksite safety and health program?

Are employees comfortable answering questions about safety and health programs and conditions at the site?

Do employees feel they have the support of management for their safety and health activities?

- *Site Conditions and Root Causes of Hazards* (Not applicable.)

- ASSIGNMENT OF RESPONSIBILITY

- *Documentation*

Are responsibilities written out so that they can be clearly understood?

- *Interviews*

Do employees understand their own responsibilities and those of others?

- *Site Conditions and Root Causes of Hazards*

Are hazards caused in part because no one was assigned the responsibility to control or prevent them?

Are hazards allowed to exist in part because someone in management did not have the clear responsibility to hold a lower-level manager or supervisor accountable for carrying out assigned responsibilities?

- ADEQUATE AUTHORITY AND RESOURCES

- *Documentation* (Only generally applicable.)

- *Interviews*

Do safety staff members or any other personnel with responsibilities for ensuring safe operation of production equipment have the authority to shut down that equipment or to order maintenance or parts?

Do employees talk about not being able to get safety or health improvements because of cost?

Do employees mention the need for more safety or health personnel or expert consultants?

- *Site Conditions and Root Causes of Hazards*

Do recognized hazards go uncorrected because of lack of authority or resources?

Do hazards go unrecognized because greater expertise is needed to diagnose them?

- ACCOUNTABILITY OF MANAGERS, SUPERVISORS, AND HOURLY EMPLOYEES

- *Documentation*

Do performance evaluations for all line managers and supervisors include specific criteria relating to safety and health protection?

Is there documented evidence of employees at all levels being held accountable for safety and health responsibilities, including safe work practices? Is accountability accomplished through either performance evaluations affecting pay and/or promotions or disciplinary actions?

- Interviews

When you ask employees what happens to people who violate safety and health rules or safe work practices, do they indicate that rule breakers are clearly and consistently held accountable?

Do hourly employees indicate that supervisors and managers genuinely care about meeting safety and health responsibilities?

When asked what happens when rules are broken, do hourly employees complain that supervisors and managers do not follow rules and never are disciplined for infractions?

- Site Conditions and Root Causes of Hazards

Are hazards occurring because employees, supervisors, and/or managers are not being held accountable for their safety and health responsibilities?

Are identified hazards not being corrected because those persons assigned the responsibility are not being held accountable?

- EVALUATION OF CONTRACTOR PROGRAMS

- Documentation

Are there written policies for onsite contractors?

Are contractor rates and safety and health programs reviewed before selection?

Do contracts require the contractor to follow site safety and health rules?

Are there means for removing a contractor who violates the rules?

- Interviews

Do employees describe hazardous conditions created by contract employees?

Are employees comfortable reporting hazards created by contractors?

Do contract employees feel they are covered by the same, or the same quality, safety and health program as regular site employees.

- Site Conditions and Root Causes of Hazards

Do areas where contractors are working appear to be in the same condition as areas where regular site employees are working? Better? Worse?

Does the working relationship between site and contract employees appear cordial?

2. Assessing the Key Components of Worksite Analysis

- COMPREHENSIVE SURVEYS, CHANGE ANALYSIS, ROUTINE HAZARD ANALYSIS

- Documentation

Are there documents that provide comprehensive analysis of all potential safety and health hazards of the worksite?

Are there documents that provide both the analysis of potential safety and health hazards for each new facility, equipment, material, or process and the means for eliminating or controlling such hazards?

Does documentation exist of the step-by-step analysis of the hazards in each part of each job, so that you can clearly discern the evolution of decisions on safe work procedures?

If complicated processes exist, with a potential for catastrophic impact from an accident but low probability of such accident (as in nuclear power or chemical production), are there documents analyzing the potential hazards in each part of the processes and the means to prevent or control them?

If there are processes with a potential for catastrophic impact from an accident but low probability of an accident, have analyses such as "fault tree" or "what if?" been documented to ensure enough back-up systems for worker protection in the event of multiple control failure?

- Interviews

Do employees complain that new facilities, equipment, materials, or processes are hazardous?

Do any employees say they have been involved in job safety analysis or process review and are satisfied with the results?

Does the safety and health staff indicate ignorance of existing or potential hazards at the worksite?

Does the occupational nurse/doctor or other health care provider understand the potential occupational diseases and health effects in this worksite?

- Site Conditions and Root Causes of Hazards

Have hazards appeared where no one in management realized there was potential for their development?

Where workers have faithfully followed job procedures, have accidents or near-misses occurred because of hidden hazards?

Have hazards been discovered in the design of new facilities, equipment, materials, and processes after use has begun?

Have accidents or near-misses occurred when two or more failures in the hazard control system occurred at the same time, surprising everyone?

- REGULAR SITE SAFETY AND HEALTH INSPECTIONS

- Documentation

If inspection reports are written, do they show that inspections are done on a regular basis?

Do the hazards found indicate good ability to recognize those hazards typical of this industry?

Are hazards found during inspections tracked to complete correction?

What is the relationship between hazards uncovered during inspections and those implicated in injuries or illness?

- Interviews

Do employees indicate that they see inspections being conducted, and that these inspections appear

thorough?

- Site Conditions and Root Causes of Hazards

Are the hazards discovered during accident investigations ones that should have been recognized and corrected by the regular inspection process?

- EMPLOYEE REPORTS OF HAZARDS

- Documentation

Is the system for written reports being used frequently?

Are valid hazards that have been reported by employees tracked to complete correction?

Are the responses timely and adequate?

- Interviews

Do employees know whom to contact and what to do if they see something they believe to be hazardous to themselves or coworkers?

Do employees think that responses to their reports of hazards are timely and adequate?

Do employees say that sometimes when they report a hazard, they hear nothing further about it?

Do any employees say that they or other workers are being harassed, officially or otherwise, for reporting hazards?

- Site Conditions and Root Causes of Hazards

Are hazards ever found where employees could reasonably be expected to have previously recognized and reported them?

When hazards are found, is there evidence that employees had complained repeatedly but to no avail?

- ACCIDENT AND NEAR-MISS INVESTIGATIONS

- Documentation

Do accident investigation reports show a thorough analysis of causes, rather than a tendency automatically to blame the injured employee?

Are near-misses (property damage or close calls) investigated using the same techniques as accident investigations?

Are hazards that are identified as contributing to accidents or near-misses tracked to correction?

- Interviews

Do employees understand and accept the results of accident and near-miss investigations?

Do employees mention a tendency on management's part to blame the injured employee?

Do employees believe that all hazards contributing to accidents are corrected or controlled?

- Site Conditions and Root Causes of Hazards

Are accidents sometimes caused at least partly by factors that might also have contributed to previous near-misses that were not investigated or accidents that were too superficially investigated?

- INJURY AND ILLNESS PATTERN ANALYSIS

- Documentation

In addition to the required OSHA log, are careful records kept of first aid injuries and/or illnesses that might not immediately appear to be work-related?

Is there any periodic, written analysis of the patterns of near-misses, injuries, and/or illnesses over time, seeking previously unrecognized connections between them that indicate unrecognized hazards needing correction or control?

Looking at the OSHA 200 log and, where applicable, first aid logs, are there patterns of illness or injury that should have been analyzed for previously undetected hazards?

If there is an occupational nurse/doctor on the worksite, or if employees suffering from ordinary illness are encouraged to see a nearby health care provider, are the lists of those visits analyzed for clusters of illness that might be work-related?

- Interview

Do employees mention illnesses or injuries that seem work-related to them but that have not been analyzed for previously undetected hazards?

- Site Conditions and Root Causes of Hazards (Not generally applicable.)

3. Assessing the Key Components of Hazard Prevention and Control

- APPROPRIATE USE OF ENGINEERING CONTROLS, WORK PRACTICES, PERSONAL PROTECTIVE EQUIPMENT, AND ADMINISTRATIVE CONTROLS

- Documentation

If there are documented comprehensive surveys, are they accompanied by a plan for systematic prevention or control of hazards found?

If there is a written plan, does it show that the best method of hazard protection was chosen?

Are there written safe work procedures?

If respirators are used, is there a written respirator program?

- Interviews

Do employees say they have been trained in and have ready access to reliable, safe work procedures?

Do employees say they have difficulty accomplishing their work because of unwieldy controls meant to protect them?

Do employees ever mention personal protective equipment, work procedures, or engineering controls as interfering with their ability to work safely?

Do employees who use PPE understand why they use it and how to maintain it?

Do employees who use PPE indicate that the rules for PPE use are consistently and fairly enforced?

Do employees indicate that safe work procedures are fairly and consistently enforced?

- Site Conditions and Root Causes of Hazards

Are controls meant to protect workers actually putting them at risk or not providing enough protection?

Are employees engaging in unsafe practices or creating unsafe conditions because rules and work practices are not fairly and consistently enforced?

Are employees in areas designated for PPE wearing it properly, with no exceptions?

Are hazards that could feasibly be controlled through improved design being inadequately controlled by other means?

- FACILITY AND EQUIPMENT PREVENTIVE MAINTENANCE

- Documentation

Is there a preventive maintenance schedule that provides for timely maintenance of the facilities and equipment?

Is there a written or computerized record of performed maintenance that shows the schedule has been followed?

Do maintenance request records show a pattern of certain facilities or equipment needing repair or breaking down before maintenance was scheduled or actually performed?

Do any accident/incident investigations list facility or equipment breakdown as a major cause?

- Interviews

Do employees mention difficulty with improperly functioning equipment or facilities in poor repair?

Do maintenance employees believe that the preventive maintenance system is working well?

Do employees believe that hazard controls needing maintenance are properly cared for?

- Site Conditions and Root Causes of Hazards

Is poor maintenance a frequent source of hazards?

Are hazard controls in good working order?

Does equipment appear to be in good working order?

- ESTABLISHING A MEDICAL PROGRAM

- Documentation

Are good, clear records kept of medical testing and assistance?

- Interviews

Do employees say that test results were explained to them?

Do employees feel that more first aid or CPR-trained personnel should be available?

Are employees satisfied with the medical arrangements provided at the site or elsewhere?

Does the occupational health care provider understand the potential hazards of the worksite, so that occupational illness symptoms can be recognized?

- Site Conditions and Root Causes of Hazards

Have further injuries or worsening of injuries occurred because proper medical assistance (including trained first aid and CPR providers) was not readily available?

Have occupational illnesses possibly gone undetected because no one with occupational health specialty training reviewed employee symptoms as part of the medical program?

- EMERGENCY PLANNING AND PREPARATION

- Documentation

Are there clearly written procedures for every likely emergency, with clear evacuation routes, assembly points, and emergency telephone numbers?

- Interviews

When asked about any kind of likely emergency, can employees tell you exactly what they are supposed to do and where they are supposed to go?

- Site Conditions and Root Causes of Hazards

Have hazards occurred during actual or simulated emergencies due to confusion about what to do?

In larger worksites, are emergency evacuation routes clearly marked?

Are emergency telephone numbers and fire alarms in prominent, easy to find locations?

4. Assessing the Key Components of Safety and Health Training

- ENSURING THAT ALL EMPLOYEES UNDERSTAND HAZARDS

- Documentation

Does the written training program include complete training for every employee in emergency procedures and in all potential hazards to which employees may be exposed?

Do training records show that every employee received the planned training?

Do the written evaluations of training indicate that the training was successful, and that the employees learned what was intended?

- Interviews

Can employees tell you what hazards they are exposed to, why those hazards are a threat, and how they can help protect themselves and others?

If PPE is used, can employees explain why they use it and how to use and maintain it properly?

Do employees feel that health and safety training is adequate?

- Site Conditions and Root Causes of Hazards

Have employees been hurt or made ill by hazards of which they were completely unaware, or whose dangers they did not understand, or from which they did not know how to protect themselves?

Have employees or rescue workers ever been endangered by employees not knowing what to do or where to go in a given emergency situation?

Are there hazards in the workplace that exist, at least in part, because one or more employees have not received adequate hazard control training?

Are there any instances of employees not wearing required PPE properly because they have not received proper training? Or because they simply don't want to and the requirement is not enforced?

- ENSURING THAT SUPERVISORS UNDERSTAND THEIR RESPONSIBILITIES

- Documentation

Do training records indicate that all supervisors have been trained in their responsibilities to analyze work under their supervision for unrecognized hazards, to maintain physical protections, and to reinforce employee training through performance feedback and, where necessary, enforcement of safe work procedures and safety and health rules?

- Interviews

Are supervisors aware of their responsibilities?

Do employees confirm that supervisors are carrying out these duties?

- Site Conditions and Root Causes

Has a supervisor's lack of understanding of safety and health responsibilities played a part in creating hazardous activities or conditions?

- ENSURING THAT MANAGERS UNDERSTAND THEIR SAFETY AND HEALTH RESPONSIBILITIES

- Documentation

Do training plans for managers include training in safety and health responsibilities?

Do records indicate that all line managers have received this training?

- Interviews

Do employees indicate that managers know and carry out their safety and health responsibilities?

- Site Conditions and Root Causes of Hazards

Has an incomplete or inaccurate understanding by management of its safety and health responsibilities played a part in the creation of hazardous activities or conditions?

CONCLUSION

The key to a successful and efficient evaluation is to combine elements when using each technique. First review the documentation available relating to each element. Then walk through the worksite to observe how effectively what is on paper appears to be implemented. While walking around, interview employees to verify that what you read and what you saw reflects the state of the safety and health program.

Effective safety and health program evaluation is a dynamic process. If you see or hear about aspects of the program not covered in your document review, ask to receive the documents, if any, relating to these aspects. If the documents included program elements not visible during your walk around the site and/or not known to employees, probe further. Utilizing this cross-checking technique should result in an effective, comprehensive evaluation of the worksite's safety and health program.