

SSPC: The Society for Protective Coatings

TECHNOLOGY GUIDE 17

Guide to Developing a Safety Program for Industrial Coating and Lining Companies

1. SCOPE

This guide assists industrial painting contractors operating within the United States with developing a written corporate safety program based on requirements of the U.S. Occupational Safety and Health Administration (OSHA). SSPC's contractor certification programs require submittal of a current copy of the contractor's corporate safety and health program, as well as evidence that it is monitored and enforced. This guide identifies the core elements and requirements for developing a company safety program that complies with SSPC certification requirements as well as meeting current OSHA recommended practices and guidelines for a safety and health program.

Although this guide is intended to be a comprehensive document, some facility owners may require companies working in their facilities to include additional program elements. Also, regulations on a federal, state, and local level are continually changing. Therefore, program elements must be periodically reviewed and supplemented or modified to ensure compliance.

2. DEFINITIONS:

Competent Person: As defined in OSHA 29 CFR 1926.32, one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them. Numerous other OSHA Standards include a similar definition of Competent Person, but additional requirements are included to address the specific hazard.

Control: In this Guide "control" means reduction or elimination of worker exposure to hazards in the workplace in accordance with OSHA standards. General methods of control include elimination, substitution, engineering, work practice, personal protective equipment, and training.

Employee: In this Guide, refers to all persons who are considered employees under the Occupational Safety and Health (OSH) Act,⁽¹⁾ including temporary, seasonal, and leased employees.

Employer: In this Guide, refers to all persons who are considered employers under the OSH Act.

Exposure: A condition under which an employee in the course of employment is reasonably likely to be subjected to a hazard.

General Duty Clause: Refers to the General Duty Clause of the OSH Act of 1970 Section 5(a)(1):

- Each employer shall furnish to each of its employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to employees.
- Each employer shall comply with occupational safety and health standards promulgated under this Act.
- Each employee shall comply with occupational safety and health standards as well as all rules, regulations, and orders issued pursuant to this Act that apply to that employee's actions and conduct.

Host Employer: An employer who controls conditions at a multi-employer work site.

Near-Miss Incident: An unplanned event that did not result in injury, illness or damage, but had the potential to do so.

Program: Procedures, methods, processes, and practices that are part of the management system at the workplace.

Root Cause: The underlying or systemic, rather than the generalized or immediate, causes of an incident.

3. JUSTIFICATION FOR A SAFETY PROGRAM: VALUE OF A SAFETY PROGRAM

A Safety Program works to protect a painting contractor's most critical asset—its employees—increasing the survivability of the corporation. Work-related injuries and illnesses lower employee morale, lower production, increase worker turnover rates, damage a company's reputation, and increase its worker's compensation (WC) Experience Modification Rate (EMR). EMR is a number used by the WC insurance industry to assess the past cost of injuries and gauge future chances of risk. The EMR is a 3-year rolling average, so it takes several years for the adverse impacts of work-related accident experience to fade away. An EMR of 1.0 is the industry average. The lower the EMR, the lower the cost of WC insurance. An EMR above 1.0 means the

⁽¹⁾ The complete text of the OSH Act is available at <<https://www.osha.gov/laws-regs/oshact/completeoshact>>

insurer has paid out more in claims than predicted for that industry, which increases WC insurance premiums. It also means that the injury experience is worse than the industry average. It is common for owners and controlling contractors to include the EMR in the grading system used during the decision process when awarding work to subcontractors. An EMR above 1.0 decreases a contractor's competitiveness for current and future contract awards. Work-related injuries also have a strong impact on a contractor's "bottom line." A standard estimate is that for every dollar spent on direct costs, four more dollars are spent on indirect costs. Consider a work-related injury resulting in \$30,000 in medical expenses, \$5,000 in indemnity cost, and \$1,000 in legal claims processing expenses. This incident has a direct cost of \$36,000, which, multiplied by four, gives an indirect cost of \$144,000. Adding the indirect cost of \$144,000 to the direct cost of \$36,000 gives a total cost of \$180,000. Now consider that the contractor operates with a 4% net profit margin. The contractor needs to be awarded, complete, and receive payment for contracts totaling \$4,500,000 just to recover the cost of the incident.

A proactive safety program includes core elements such as the use of job hazard analysis to identify and mitigate a hazard prior to that hazard causing an injury or illness. Reducing the number of work-related injuries and illnesses protects a company's most valuable asset, improves productivity, lowers the EMR, and decreases financial losses. This proactive approach increases a company's competitiveness, survivability, and growth, and improves communication between the employer and employee, which in turn improves workplace morale, employee retention, recruiting, and the quality of work.

4. CORE ELEMENTS OF A SAFETY PROGRAM:

A safety program provides compliance with the OSHA regulatory requirements to include the General Duty Clause that requires a workplace free of recognized hazards. A proactive approach to workplace safety concentrates on the prevention of, rather than the response to, work-related injuries and illnesses. A proactive program includes the following seven core elements of a company safety program:

1. Management leadership
2. Employee participation
3. Hazard identification and assessment
4. Hazard prevention and control
5. Education and training
6. Program evaluation
7. Communication and coordination for multi-employer worksites

4.2 MANAGEMENT LEADERSHIP AND EMPLOYEE PARTICIPATION COMMITMENT: Owners and top management should make a visible commitment to the safety program, define the program goals, provide the resources to support and foster the program, and expect

performance. The visible commitment starts with a signed written policy statement by top management defining the company's commitment to the safety program, which should include a pledge to support and maintain a safe and healthy workplace for all employees. The written statement should be disseminated to all the company's employees, contractors, subcontractor, staffing agencies, vendors, visitors, and customers. The commitment also includes considering safety in all business decisions, starting all business meetings and events with a safety discussion, and following the same safety rules as the workforce.

4.2 PROGRAM GOALS: Management should set specific, measurable goals and objectives to improve the overall safety program. The goals and objectives identify the specific actions and expectations of all levels of the organization. An example of a measurable goal and objective is "A 10% reduction of our company's recordable incident rate in one year by way of management providing the resource of manhours needed for employees to attend training sessions, supervisors holding daily tailgate meetings, and 100% worker participation in the tailgate meetings."

4.3 ALLOCATION OF RESOURCES: Management should allocate the necessary resources for program implementation, the pursuit of the goals and objectives, and for program evaluation and improvements. This involves management making a budgetary commitment directing the necessary resources to implement, maintain, and improve the program.

4.4 PERFORMANCE: Management should define the individual roles required for program implementation, effectiveness, and improvement. Once the roles are defined, management assigns the responsibilities of fulfilling the roles to one or more Safety Leaders. It is essential to assign responsibilities to individuals who embrace open communication, create positive environments, and communicate in a respectful manner. The safety leaders drive the safety program efforts, are responsible for the planning and coordinating activities, establish a culture of free communication without fear of retaliation, encourage and support supervisors to hold employees accountable, and provide program status reports to management. The safety leaders also provide positive recognition for employee compliance with the program and the achievement of program goals.

4.5 ORGANIZATION AND REPORTING: Management should provide an organizational management structure to ensure the program functions effectively. Management-designated managers should be assigned the responsibility of receiving, reviewing, and responding to reports of workplace safety and health concerns. Reporting procedures include documenting all work-related fatalities, injuries, illnesses, and near misses, as well as identifying the root

cause of the incident. An OSHA-300 Log of Work-related Fatalities, Injuries and Illnesses should be maintained unless the company is exempt from this requirement. Record all recordable incidents as defined by OSHA on the 300 Log, within seven calendar days of the work-related fatality, injury, or illness. A host employer is required to log the injuries and illnesses of outside employees at the worksite under certain conditions, such as when using temporary employees who are under the direction and supervisor of the host employer. On an annual basis, the 300 Log is certified by a member of upper management by reviewing the log's accuracy and signing the log. Complete an OSHA 301 Incident Report Form or its equivalent for each entry on the log to comply with the required First Report of Injury or Illness by the state worker's compensation law. On an annual basis, prepare and post the OSHA 300A annual summary from February 1st through April 30th. Note: OSHA requires employers to maintain and retain many other records.

4.6 AUTHORITY: Managers, supervisors, and employees should have the authority and resources to carry out their safety and health responsibilities as defined in the Safety Program. Company management oversees the prompt correction of unsafe conditions and actions. One example is the immediate repair or removal of damaged or improperly-maintained equipment from operation. Employees should be authorized and encouraged to report work-related incidents and near misses, as well as to provide recommendations to improve the health and safety of workplace processes.

5. EMPLOYEE PARTICIPATION

Employee participation is an integral part of a safety program. The success of the program relies heavily on the willingness and level of employee participation. Encourage employee participation by creating a culture of respectful, open communication without fear of retaliation. Provide employees with the necessary training and resources that provide them with the opportunity to provide valuable input related to the program such as hazard recognition and mitigation efforts. Encourage the reporting of safety concerns, near misses, injuries, and illnesses by establishing a confidential reporting process. Close the communication loop on reported concerns by informing the employee of the corrective actions taken. Establish a policy that authorizes any employee who identifies a hazard to immediately stop production until the issue is resolved. Involve exposed workers in the identification of hazard mitigation methods—the safety leader may not always be as aware of the details of a process as the worker who performs that process. Establish unrestricted access to safety information such as Safety Data Sheets, environmental monitoring results, audit results, incident investigations, job hazard analysis results, development of the goals and objectives of the program, site inspections, mentoring programs, and incident trending information. This inclusion develops trust, promotes

participation from members of all levels of the organization, and improves the company's ability to make effective decisions.

6. HAZARD IDENTIFICATION

Hazard recognition is a proactive process versus a reactive process such as an incident investigation. The process provides the opportunity to identify and work towards the mitigation of known or suspected safety and health hazards. One way of defining hazard recognition is a five-step process that includes:

1. Analysis of known existing and potential hazards,
2. Identifying hazards during workplace inspection,
3. Identifying hazards during incident investigations,
4. Identifying hazards associated with emergency or nonroutine operations, and
5. Characterizing the hazard.

The employer must systematically identify and assess hazards before employee exposure to validate the effectiveness of the company safety program and to ensure compliance with OSHA regulations. The employer should conduct regular inspections of the workplace and review safety and health information on a regular schedule. New equipment, materials, and processes should be evaluated for hazards before being introduced in the workplace. Hazards not immediately correctable should be ranked directing the most significant emphasis towards those that are the most frequently encountered and pose the highest risks. Workers should be informed about ways to avoid these hazards. Some OSHA Standards impose additional requirements for hazard identification and assessment. Examples are the requirements associated with working in a confined space and fall protection.

7. HAZARD PREVENTION AND CONTROL

Hazard Prevention and Control protects workers, reduces work-related injuries and illnesses by reducing risk, and aids in compliance with the General Duty Clause by improving the safety and health of the workplace. To increase employee buy-in during the implementation of work practice changes, involve affected employees in each step of the hazard prevention and control process. The prevention of identified hazards starts with the identification of control methods. Accomplish this by reviewing relevant OSHA regulations, industry publications, review of historical mitigation methods, and trade organizations. The next step in the process is the selection of a control method. When selecting a control method consider the hierarchy of controls: elimination, substitution, engineering controls, administrative controls, and lastly personal protective equipment. Once the control method is selected, develop a hazard control plan that lists the identified hazards in order of priority, assigns tasks and responsible parties, sets a date of completion for each

hazard control, tracks progress, and identifies verification of established hazard prevention controls. Discuss the plan with all affected employees. Then, execute the hazard control plan implementing the controls and evaluate the control measures to determine their effectiveness. Finally, confirm the proper training of all affected workers on the use of the control methods, work practices, and personal protective equipment use.

8. EDUCATION AND TRAINING

Education and training provide employees from all levels of the organization with the knowledge and skills to safely perform their duties as well as the ability to recognize, report, and control hazards. Provide training using language and vocabulary that the employees understand. Training topics should include employee roles in the program, hazard identification and controls, employee and employer rights and responsibilities under the OSH Act of 1970 and relevant OSHA regulations.

All new employees should be provided training and information before initial assignment to a job involving exposure to a hazard. The employer should provide updated information and training as often as necessary to ensure employees are informed and trained about workplace conditions that create new hazards or increase an existing hazard. All such training should be documented and be readily available for inspection.

Most OSHA standards require a basic level of training, some activities require more extensive training. OSHA provides the following education and training resources.

- 29 CFR 1926.65 Appendix E Training Curriculum Guidelines
- OSHA 3524 (2015) Resources for Development and Delivery of Training for Workers
- OSHA 2254-09R (2015) Training Requirements in OSHA Standards

Examples of standards with training requirements applicable to industrial painting operations are listed in Table 1:

TABLE 1
FEDERAL REGULATIONS WITH TRAINING REQUIREMENTS
APPLICABLE TO INDUSTRIAL PAINTING OPERATIONS

Hazard	29 CFR	Training Requirements
Blood Borne Pathogens	1910.1030	1. An accessible copy of the regulatory text of this standard and an explanation of its contents. 2. A general explanation of the epidemiology and symptoms of bloodborne diseases. 3. An explanation of the modes of transmission of bloodborne pathogens. 4. An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan. 5. An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials. 6.
Confined Spaces, Permit Required	1926.1207	The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.
Fall Protection	1926.503	The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed to minimize these hazards.
First Aid	1910.151	In the absence of an infirmary, clinic, or hospital near the workplace, which is used for the treatment of all injured employees, a person or persons shall be adequately trained to render first aid. Adequate first aid supplies shall be readily available.
Hazard Communication Standard	1910.1200 1926.59	Employers shall provide employees with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard about which the employees have not previously received training is introduced into their work area. Information and training may be designed to cover categories of hazards (e.g., flammability, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and safety data sheets.
Hearing Protectors	1910.95	When employees are required to wear hearing protectors due to noise levels above the OSHA Permissible Exposure Level, they shall be fitted with hearing protectors, trained in their use and care, and required to use them.

Hazard	29 CFR	Training Requirements
Ladders	1926.1060	The employer shall provide a training program for each employee using ladders and stairways, as necessary. The program shall enable each employee to recognize hazards related to ladders and stairways and shall train each employee in the procedures to be followed to minimize these hazards.
Lead Paint Hazard	1926.62	The employer shall also provide an annual training program for each employee who is subject to lead exposure at or above the action level on any day. The employer shall assure that each employee is trained in the following: The content of this standard and its appendices; the specific nature of the operations which could result in exposure to lead above the action level; the purpose, proper selection, fitting, use, and limitations of respirators; the purpose and a description of the medical surveillance program, and the medical removal protection program including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant); the engineering controls and work practices associated with the employee's job assignment; the contents of any compliance plan in effect; instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician; and the employee's right of access to records under 29 CFR 1910.20. The employer shall make readily available to all affected employees a copy of 29 CFR 1926.62 and its appendices.
Lockout and Tagging Circuits	1910.147	The employer shall establish a program consisting of energy control procedures, employee training and periodic inspections to ensure that before any employee performs any servicing or maintenance on a machine or equipment where the unexpected energizing, startup or release of stored energy could occur and cause injury, the machine or equipment shall be isolated from the energy source and rendered inoperative.
Portable Fire Extinguishers	1910.157	Where the employer has provided portable fire extinguishers for employee use in the workplace, the employer shall also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with the incipient stage of firefighting. The employer shall provide the education described above upon initial employment and at least annually after that.
Powered Industrial Truck Operator Training	1910.178	These provisions mandate a training program that bases the amount and type of training required on the operator's prior knowledge and skill; the types of powered industrial trucks the operator operates in the workplace; the hazards present in the workplace; and the operator's demonstrated ability to operate a powered industrial truck safely. Refresher training is required if: the operator is involved in an accident or a near miss incident; the operator has been observed operating the vehicle in an unsafe manner; the operator has been determined during an evaluation to need additional training; there are changes in the workplace that could affect safe operation of the truck; or the operator is assigned to operate a different type of truck. Evaluations of each operator's performance are required as part of the initial and refresher training, and at least once every three years.
Respiratory Protection	1910.134	In any workplace where respirators are necessary to protect the health of the employee or whenever the employer requires respirators, the employer shall establish and implement a written respiratory protection program with work-site-specific procedures. The program shall be updated as necessary to reflect those changes in workplace conditions that affect respirator use. The employer shall include in the program the following provisions of this section, as applicable: Training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance; and procedures for regularly evaluating the effectiveness of the program.
Scaffolding	1926.451	The employer shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards.
Power-operated hand tools	1926.302	Only employees who receive training in the operation of the particular tool in use shall be allowed to operate a power-actuated tool.