

OSH INFORMATION MEMORANDUM 93-X-90

TO: Assistant Directors, Supervisors, and Field Personnel

FROM: W.M. Lybrand

DATE: April 1, 1993

SUBJECT: SCRR 1910.119, Process Safety Management of Highly Hazardous Chemicals—Compliance Guidelines and Enforcement Procedures

A. Purpose.

This instruction establishes uniform policies, procedures, standard clarifications, and compliance guidance for enforcement of the standard for Process Safety Management of Highly Hazardous Chemicals, 1910.119 (“PSM standard”), and amendments to the standard for Explosives and Blasting agents, 1910.109.

B. Background.

On February 24, 1992, OSHA promulgated the Final Rules for Process Safety Management of Highly Hazardous Chemicals. This standard originally became effective on May 26, 1992. An administrative stay delayed the effective date of paragraphs (f), (h), (j), and (l) until August 26, 1992. That stay has expired and the stayed provisions are now fully effective.

1. In recent years, a number of catastrophic accidents in the chemical industry have drawn attention to the safety of processes involving highly hazardous chemicals. OSHA has determined that employees have been and continue to be exposed in their workplaces to the hazards of releases of highly hazardous chemicals that may be toxic, reactive, flammable, or explosive.
2. The requirements of the PSM standard are intended to eliminate or mitigate the consequences of such releases. The standard emphasizes the application of management controls when addressing the risks associated with handling or working near hazardous chemicals.
3. In addition, the PSM standard has been developed in fulfillment of Federal OSHA’s obligation under the Clean Air Act Amendments (CAAA) of 1990, Section 304 (a). The final rule is consistent with the mandate of the CAAA.

C. Enforcement Activity Related to the PSM Standard—Types of Inspections.

1910.119 has broad applicability to potentially hazardous processes that may exist in a wide variety of industries. Accordingly, enforcement activities related to the PSM standard—either to determine if an employer is covered by the standard or to assess the employer’s compliance with it—may take place in any of the inspection types described below. The following guidelines shall apply to PSM-related compliance activity:

1. Program-Quality-Verification (PQV) Inspections.
The primary enforcement model for the PSM standard shall be the PQV inspection, as described at F. and G. of this instruction. Programmed PQV inspections shall be scheduled as described at E. of this inspection.
2. Other Programmed Inspections: Screening for PSM Coverage.
In all programmed safety and health inspections in general industry, a determination shall be made as to whether the establishment is covered by the PSM standard.
 - a. This determination shall follow the criteria presented at 1910.119(a), including appropriate reference to Appendix A of 1910.119. The determination may be made in conjunction with an assessment of the employer’s Hazard Communication program.
 - b. If the establishment is found to be covered by the standard:
 - (1) It shall be further determined if the establishment is included in the universe of affected establishments from which PQV inspections may be scheduled. (See E. of this instruction.)
 - (2) The employer shall be provided (if available):
 - (a) Copies of the OSHA publications “Process Safety Management,” OSHA Publication 3132, which also contains the full text of 1910.119; and “Process Safety Management—Guidelines for Compliance;” and
 - (b) A letter notifying the employer that the subject establishment is covered by the PSM standard and may be inspected under the standard. The letter shall also emphasize the employer’s obligation to comply with the standard. An example of such a letter is provided as Appendix F of this instruction.

- c. The OSH Supervisors and Assistant Director shall ensure proper coding of the OSHA-1 (as described at K. and Appendix H. of this instruction) to identify the establishment as either known to be covered by the PSM standard or known not to be covered by the standard.

3. Unprogrammed PSM-related Inspections.

In all unprogrammed inspection activity relating to the PSM standard, a determination shall be made as to whether the establishment is covered by 1910.119.

- a. If a formal complaint or referral relating to the PSM standard is received regarding any workplace classified in one of the SIC codes listed at Appendix C of this instruction, the complaint or referral item(s) shall be investigated and:
 - (1) All programs required by the PSM standard shall be screened for obvious violations; and
 - (2) A CO/IH referral for a PQV inspection shall be considered if major deficiencies are indicated. The CO/IH shall consult with their supervisor on what is an obvious violation and/or major deficiency. This determination shall be documented in the case file.
- b. Investigations of formal, PSM-related complaints and referrals in establishments in all other SIC codes shall normally be limited to the complaint item(s) only, unless violations related to the complaint or referral items are found.

4. Responses to Accidents and Catastrophes.

Responses to accidents and catastrophes involving PSM shall follow the guidelines contained in the Compliance Manual and—where appropriate—in OSHA instruction “OSHA Response to Significant Events of Potentially Catastrophic Consequence,” in addition to the guidelines of this instruction. If the workplace is classified in one of the SIC codes listed at Appendix C of this instruction, a PQV inspection shall be considered; the reasons for the determination shall be document in the case file.

5. All Other Inspections.

Normally, there shall be no PSM-related activity on any inspection other than those described at C.1. through C.4., above.

D. Inspection Resources.

Appropriate levels of staff training and preparation are essential for compliance activities relating to the PSM standard. In particular, it is anticipated that PQV inspections will be highly resource-intensive; they will therefore require careful planning and coordination. The recommendations included as Appendix G of this instruction may be used as a guide for such planning.

1. PQV Team Leaders (“Level One”).

Only trained compliance safety and health officers with experience in the chemical industry shall be assigned to lead a PQV inspection under this standard.

 - a. As a minimum, this training must include the OSHA Training Institute’s Course 330, “ Safety and Health in the Chemical Processing Industries,” and Course 340, “Hazard Analysis in the Chemical Processing Industries,” or equivalent training such as that offered by the National Institute of Standards and Technology.
 - b. Team leaders must have prior experience in the chemical industry. This experience should include experience obtained from accident/explosion investigations in chemical or petrochemical plants, through previous chemical inspections involving process safety management evaluation, or through previous chemical industry employment.
2. PQV Team Members (“Level Two”).

CO/IHs may be assigned as PQV team members, or to conduct unprogrammed inspections in workplaces in the targeted SIC codes listed in Appendix C of this instruction, if they have 2 years of OSHA inspection experience or the equivalent and have completed Course 330, “Safety and Health in the Chemical Processing Industries” (including offerings of this course prior to Fiscal Year 1991) and Course 340, “Hazard Analysis in the Chemical Processing Industries.”
3. CO/IHs With Less Training.

Complaint and other unprogrammed inspections pertaining to some sections of the standard may be conducted by CO/IHs who do not have the training and experience described at D.1. or D.2., above, but who are experienced in evaluating other programmatic standards such as hazard communication and lockout/tagout and in evaluating respirator programs.

 - a. The following sections of 1910.119 may be appropriately evaluated by such CO/IHs:
 - ◆ (c) Employee participation.
 - ◆ (g) Training.
 - ◆ (h) Contractors.
 - ◆ (k) Hot work permits.

- ◆ (m) Incident investigation.
- ◆ (n) Emergency planning and response.

E. PQV Inspection Scheduling.

Due to the resource-intensive nature of inspections for compliance with the PSM standard, the OSH Division will be able to perform only a limited number of PQV inspections (as described at F. and G. of this instruction) each year.

1. Beginning in FY 1994, Federal OSHA will provide the state a list of candidates for inspection.

The establishment list will be based on Federal criteria in Section J. of OSHA Instruction CPL 2-2.45A.

The selections will be based on emphasis on a corporate approach to give inspection priority to the maximum number of different corporations rather than targeting multiple inspections in the same corporation.

2. The state will nominate one establishment for a PQV inspection or provide an explanation of why a PQV inspection should not be scheduled.
3. The state will select other establishments, as resources permit, to inspect under a local emphasis program.
4. The state will use the selection and deletion criteria outlined in J.3 and J.4 of CPL 2-2.45A.

F. Scope of PQV Inspection.

Comprehensive inspections under the PSM standard shall evaluate the procedures used by the employer and the process-related contract employers to manage the hazards associated with processes using highly hazardous chemicals. Normally, these inspections will embody a three-fold approach, which for reference is termed **Program-Quality-Verification** (PQV).

1. First, the employer's and the contract employers' **Program** for complying with each of the listed elements of the PSM standard shall be evaluated in accordance with the PSM Audit Guidelines contained in Appendix A of this instruction.
2. Second, the **Quality** of the employer's and the contract employers' procedures shall be compared to acceptable industry practices as described in the standard to determine compliance.

3. Third, **Verification** of the employer's and the contract employers' effective implementation of the program can be made through review of written programs and records of activity, interviews with employees at different levels, and observation of site conditions. The team leader shall select one or more processes as described at G.7. of this instruction to perform the verification portion of the inspection.

G. PQV Inspection Procedures.

The procedures given in the Compliance Manual shall be followed except as modified in the following sections:

1. Opening Conference
Where appropriate, the facility safety and health director, Process Safety Manager, Union Representative, or other person capable of explaining the company's Process Safety Management Program shall be included in the opening conference.
 - a. During the opening conference, CO/IHs shall familiarize themselves with the establishment's emergency response procedures and emergency alarms.
 - b. CO/IHs shall also request that the management representative(s) provide them with a reasonably detailed overview of the chemical process at the facility, including block diagrams indicating chemicals and processes involved, P&IDs (with legend), and inventories of highly hazardous chemicals.
2. PSM Overview.
Prior to beginning the walkaround inspection, the CO/IHs shall request an explanation of the company's Process Safety Management Program including, at a minimum:
 - a. How the elements of the standard are implemented
 - b. Personnel designated as responsible for implementation of the various elements of the standard; and
 - c. A description of company records used to verify compliance with the standard. (See also Appendix E of this instruction.)
3. Initial Walkaround.
After this familiarization, the inspection may begin with a brief walkaround inspection of those portions of the facility within the scope of the standard. Additional walkaround activity may be necessary after

selection of the process unit(s). The purpose of the initial walkaround is to:

- a. Give CO/IHs a basic overview of the facility operations;
- b. Allow CO/IHs to observe potential hazards such as pipe work in risk of impact, corroded or leaking equipment, unit or control room sitting, and location of relief devices; and
- c. Solicit input from the employee representative concerning potential PSM program deficiencies.

4. Personal Protective Equipment.

In addition to normal inspection protective equipment, CO/IHs conducting these inspections shall be provided with NIOSH –approved emergency escape respirators for use during emergency conditions.

- a. CO/IHs shall carry emergency escape respirators, when necessary, during the walkaround portion(s) of the inspection. CO/IHs conducting these inspections shall have received proper training in the use of emergency escape respirators.
- b. CO/IHs shall be provided with appropriate alert monitors (e.g., HCN, Cl₂) where such devices are necessary.
- c. CO/IHs shall ensure that any still cameras and/or video cameras are intrinsically safe for use in the process areas being inspected.

5. Documentation to be requested—General and Process-Related.

At the conclusion of the opening conference, the CO/IH shall request access to or copies of the documents listed at G.5.a. through G.5.m. below for those PHAs already completed by the employer (see(e)(1)(i) and (e)(1)(v)). Initially, to expedite the inspection process, only access to documents should be requested. During the inspection, as potential violations of the standard are observed, copies of the written documentation described below shall be requested to substantiate citations.

- a. OSHA 300 Logs for the past 3 years for both the employer and all process-related contractor employer(s).
- b. Employer’s written plan of action regarding the implementation of employee participation.

- c. Written process safety information for the unit(s) selected (see G.7.), if available, such as flow diagrams, piping and instrumentation diagrams (P&ID's), and process narrative descriptions.

NOTE: The employer is required to compile process safety information on a schedule consistent with the employer's schedule for conducting the process hazard analyses (PHA).

- d. Documented priority order and rationale for conducting process hazard analyses; copies of any process hazard analyses performed after May 25, 1987; team members; actions to promptly address findings; written schedules for actions to be completed; documentation for resolution of findings; documentation verifying communication to appropriate personnel; and 5-year revalidation of original PHA required by standard.
- e. Written operating procedures for safely conducting activities in each selected unit; annual certification that operating procedures describing safe work practices for potentially hazardous operations, including (but not limited to) lockout/tagout, confined space entry, lifting equipment over process lines, capping over ended valves, opening process equipment or piping, excavation, and control over entrance into a facility of maintenance, laboratory, or other support personnel.
- f. Training records for initial and refresher training for all employees in the selected unit(s) whose duties involve operating a process; methods for determining frequency of refresher training; certification of required knowledge, skills, and abilities to safely perform job for employees already involved in operating a process on May 26, 1992, who have not received initial training; and training material.
- g. Pre-startup safety review for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information; documentation of employee training.
- h. Written procedures and schedules to maintain the ongoing integrity of process equipment; the relevant portions of applicable manufacturers' instructions, codes, and standards; and inspection and tests performed on process equipment in the unit(s) selected.
- i. Hot work permit program and active permits issued for the unit(s) selected.

- j. Written procedures to manage change to process chemicals, technology, equipment and procedures; and changes to facilities that affects a covered process.
 - k. Incident investigation reports of the unit(s) selected, resolutions and corrective actions.
 - l. Written emergency action plan including procedures for handling small releases and evidence of compliance with 1910.120(a), (p), and (q), where applicable.
 - m. The two most recent compliance audit reports, appropriate responses to each of the findings, and verifications that deficiencies have been corrected.
6. Documentation to be Requested—Contractor- Related.
This section applies only to contractors in covered process areas. Refer to 1910.119 (h)(1). The following information relating to contractor compliance shall be requested:
- a. Documentation from Employer:
 - (1) Information relating to contract employers' safety performance and programs;
 - (2) Methods of informing contract employers of known potential hazards related to contractor's work and the process and applicable provisions of the emergency action plan;
 - (3) Safe work practices to control the entrance, presence and exit of contract employers and contract employees in covered process areas;
 - (4) Evaluation of contractor employer performance in fulfilling responsibilities required by the standard;
 - (5) Contract employee injury and illness logs related to work in process areas; and
 - (6) A list of unique hazards presented by contractors' work or hazards found in the workplace that has been reported to the employer.
 - b. Documentation from Contract Employer:

- (1) Records showing employees receive training in and understand safe work practices related to the process on or near which they will be working to perform their jobs safely;
- (2) Known potential fire, explosion or toxic release hazards related to job, and applicable provisions of emergency action plan; and
- (3) A list of unique hazards presented by contractors' work or hazards found in the workplace that has been reported to the employer.

NOTE: The documentation described at G.5. and G.6.a. may also be required of the contract employer, depending on the scope of the contract employer's activities.

7. Selection of Process(es).

The team leader shall select one or more processes within which to evaluate compliance with the standard. This selection shall be based on the factors listed below, and shall be documented in the case file:

- a. Factors observed during the walkthrough;
- b. Incident reports and other history;
- c. Company priorities for or completed process hazard analyses (PHA);
- d. Age of the process unit;
- e. Nature and quantity of chemicals involved;
- f. Employee representative input;
- g. Current hot work, equipment replacement, or other maintenance activities; and
- h. Number of employees present.

H. Compliance Guidelines for specific Provisions of 1910.119.

Guidelines for assessing compliance with the provisions of the PSM standard are provided in Appendix A of this instruction.

1. CO/IH shall use the guidance contained in Appendix A during all enforcement activities related to the PSM standard.

2. Clarifications and interpretations are provided in Appendix B of this instruction. Appendix B (or a subsequent revision) shall normally be the first point of reference in interpreting 1910.119.

I. Citations

Citations for violations of the PSM standard shall be issued in accordance with the Compliance Manual.

1. Use of Appendix A.
Appendix A, PSM Audit Guidelines, is constructed as a series of questions relating to each of the pertinent provisions of the standard.
 - a. The questions are designed to elicit a determination of “Yes” or “No” by the CO/IH as to whether compliance with the provision has been met.
 - b. A determination of “No” for any provision indicates noncompliance; thus any “No” shall normally result in a citation for a violation of that provision.
 - c. The CO/IH shall thoroughly document each such determination in the case file.

J. Non-Mandatory Appendices to this Instruction.

This instruction contains two **non-mandatory** appendices that are designed to provide additional compliance assistance.

1. Appendix E, Recommended Health Care Management Program Components for Process Safety Management, is still being developed and is designated as “Reserved.”
2. Appendix G, Recommended Guidelines for PQV Inspection Preparation.

K. Recording in IMIS.

Information about PSM-related inspections shall be recorded in IMIS following current instructions given in the IMIS manual. Refer to Appendix H of this instruction for additional guidance.