

CANCELLED

**State of Alaska
Department of Labor
Division of Labor Standards and Safety**

AKOSH Program Directive 92-8

Date: February 11, 1993

To: All AKOSH Staff

From: Donald G. Study, CSP, Director

Subject: 1910.119, Process Safety Management of Hazardous Chemicals--Compliance Guidelines and Enforcement Procedures

- A. Purpose. This Program Directive (PD) 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 for Explosives and Blasting Agents, Subchapter 9.
- B. Background. On February 24, 1992, federal OSHA promulgated the Final Rule for Process Safety Management of Highly Hazardous Chemicals. The OSHA standard originally had an effective date of May 26, 1992 but an administrative stay delayed the effective date of paragraphs (f), (h), (j), and (l) until August 26, 1992. AKOSH adopted the OSHA standard by reference and it became effective on September 20, 1992. On September 28, 1992, OSHA published OSHA Instruction CPL 2-2.45A to provide compliance guidance for enforcement of the PSM standard. This PD is being issued in response to CPL 2-2.45A.

OSHA adopted the PSM standard for the following reasons:

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 which 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 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.
4. It is anticipated that joint inspection activities related to the PSM standard will arise between OSHA, the Environmental Protection Agency, and the Chemical Safety and Hazard Investigation Board, which was mandated by 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 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 PD. Programmed PQV inspections shall be scheduled as described at E. of this PD.
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:
 - (a) Copies of the OSHA publications "Process Safety Management," OSHA Publication 3132, (available from the Consultation and Training (C&T) unit) 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 chief shall ensure proper coding of the OSHA-1 (as described at L. and Appendix H of this PD) 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 PD, 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 CSHO referral for a PQV inspection shall be considered if major deficiencies are indicated. 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 chapter VIII of the Compliance Manual (CM) and--where appropriate--in PD 91-11, "OSHA Response to Significant Events of Potentially Catastrophic Consequence," in addition to the guidelines of this PD. If the workplace is classified in one of the SIC codes listed at Appendix C of this PD, a PQV inspection shall be considered; the reasons for the determination shall be documented 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 PD may be used as a guide for such planning.

1. PQV Team Leaders ("Level One"). Only trained compliance safety and health officers (CSHOs) 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.

NOTE: Due to a significant change in course content, completion of Course 330 prior to Fiscal Year 1991 does not meet this requirement for PQV team leaders.

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"). CSHOs 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 PD, if they have 2 years of AKOSH 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. CSHOs With Less Training. Complaint and other unprogrammed inspections pertaining to some sections of the standard may be conducted by CSHOs 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 CSHOs:

- (c) Employee participation.

- (g) Training.
 - (h) Contractors.
 - (k) Hot work permits.
 - (m) Incident investigations.
 - (n) Emergency planning and response.
- b. The Chief and Assistant Chiefs should make full utilization of the resources available from the OSHA Area and Regional Offices in arriving at decisions regarding compliance or noncompliance. It is recommended that AKOSH supervisory staff call appropriate OSHA staff for technical assistance in arriving at decision regarding compliance or noncompliance.
- c. Nevertheless, to the extent possible, the Chief shall attempt to utilize CSHOs with experience and training in the chemical industry to perform such unprogrammed inspections.
4. State Plan States. Each State shall have one or more CSHOs trained to meet the requirements for PQV team leaders and an appropriate number of qualified team members. OSHA will provide technical assistance, as needed, through the Regional Office, Health Response Team, and the Office of Construction and Engineering. At the present time AKOSH does not have any CSHOs who have the training necessary to be team leaders. Two industrial hygienists are scheduled to attend Course 330 and will be scheduled for Course 340 as soon as possible. It is anticipated that these two industrial hygienists will be qualified team leaders by the end of calendar year 1993. In the meantime if AKOSH must conduct an unprogrammed Process Safety Management inspection, the Director will contact the OSHA Regional Administration to determine if it is appropriate to request a trained OSHA CSHO to be leader of an AKOSH PQV team.
- E. PQV Inspection Scheduling. Due to the resource-intensive nature of inspections for compliance with the PSM standard, the Agency will be able to perform only a limited number of AKOSH inspections (as described at K. and L. of this instruction) each year. No scheduled inspections are planned in FY 1993. A special targeting and scheduling system will be investigated in FY 1994 to maximize the effective use of inspection resources.
- I. Targeting. AKOSH wishes to make the most effective use of its limited resources, and therefore will use the factors listed below in determining the SIC codes to be inspected. AKOSH will select the SICs that have experienced the greatest number of accidents/incidents as determined from these three sources:

- a. Published insurance industry reports of major accidents/incidents.
 - b. IMIS data, including the OSHA-170 Investigation Summary File.
 - c. EPA Accident Release Information Program (ARIP) data.
2. Current Targeted SICs. A list of targeted SIC codes based on current data, as described at E.1., is included as Appendix C of this PD. This Appendix may be updated periodically.
3. Scheduling. PQV inspections shall be scheduled (starting in FY 1994) as follows:
- a. Using the list of SICs determined as described in E.1. above, OSHA will annually create an initial list including all known establishments within each of the identified SICs for each of their Regions. This list shall be organized by establishment, by establishment size, by corporate identity (as determined through a commercially available source), and by State.
 - b. Region X will forward the initial list of Alaska establishments when they receive it from their Directorate of Compliance Programs.
 - c. Within 30 days of receipt of the initial list, the Chief of Compliance will select one candidate for a PQV inspection and shall inform the Director of why this establishment was selected. In making this selection, the Chief shall consider the following factors:
 - (1) Number of employees at the facility.
 - (2) Age of the facility.
 - (3) Known toxicity of chemicals used in the facility's processes.
 - (4) Frequency of media reports of releases or other incidents at the facility.
 - (5) Local EPA information.
 - (6) Past AKOSH history of the facility, including complaints received and/or followup inspections due.
 - (7) Information from local/municipal fire departments.
 - d. The director will notify the OSHA Regional Administrator of the establishment to be scheduled for a PQV inspection. If the director

decides that a PQV inspection will not be performed during a particular year, a letter explaining the reasons for not conducting an inspection will be sent to the OSHA Regional Administrator.

5. Local Emphasis Programs. There are relatively few establishments in the targeted SIC codes listed in Appendix C. If the list developed by OSHA does not include any Alaskan establishments, the Chief of Compliance may choose an establishment using local knowledge that may be a candidate for a PQV inspection i.e. one of the Alaskan pulp mills. The same criteria set out in E.3.c. must be used in this selection process and no inspection will be performed until the selection has been approved by the Director. The Director will also inform the OSHA Regional Administrator before authorizing such a local emphasis inspection.

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. (See also H. of this PD.)
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 PD to perform the verification portion of the inspection.

G. PQV Inspection Procedures. The procedures given in the CM, Chapter III, shall be followed except as modified in the following sections:

1. Opening Conference. Where appropriate, the facility safety and health director, Process Safety Manager, 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, CSHOs shall familiarize themselves with the establishment's emergency response procedures and emergency alarms.
 - b. CSHOs 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.
2. PSM Overview. Prior to beginning the walkaround inspection, the CSHOs 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 CSHOs a basic overview of the facility operations;
 - b. Allow CSHOs to observe potential hazards such as pipework in risk of impact, corroded or leaking equipment, unit or control room siting, 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, CSHOs conducting these inspections shall be provided with flame retardant coveralls for protection from flash fires and with NIOSH-approved emergency escape respirators for use during any emergency conditions.
- a. CSHOs shall wear flame-retardant coveralls in all areas of the plant where there is potential for flash fires and as may be required by company policy.

NOTE: Clothing made of hazardous synthetic fabrics should not be worn underneath flame retardant coveralls.

- b. CSHOs shall carry emergency escape respirators, when necessary, during the walkaround portion(s) of the inspection. CSHOs conducting these inspections shall have received proper training in the use of emergency escape respirators.
 - c. CSHOs shall be provided with appropriate alert monitors (e.g., HCN, Cl₂) where such devices are necessary.
 - d. CSHOs 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 CSHO shall request access to or copies of the documents listed at G.5.a. through G.5.m. below. 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. DOSH 200 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 of 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 are current and

accurate; written 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 the content of the training; 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 September 20, 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 affect a covered process.
 - k. Incident investigation reports for 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 [State standards 10.0101(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. 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 area;
- (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 contractor's work or hazards found in the workplace that have 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 have been reported to the employer.

NOTE: The documentation described at L.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 PD.

- 1. CSHOs 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.

NOTE: Appendix B will be updated on an ongoing basis through page changes to this instruction, as more interpretations are developed. CSHOs must therefore take care to ensure that their reference copies are up-to-date.

I. Citations. Citations for violations of the PSM standard shall be issued in accordance with the CM, Chapters IV and V, with the following additional directions:

- 1. Classification. The requirements of the PSM standard are intended to eliminate or mitigate the consequences of releases of highly hazardous chemicals. The provisions of the standard present closely inter-related requirements, emphasizing the application of management controls when addressing the risks associated with handling or working near hazardous chemicals.
 - a. Any violation of the PSM standard, therefore, is a condition which could result in death or serious physical harm to employees.

- b. Accordingly, violations of the PSM standard shall normally **not** be classified as "other-than-serious."
 2. 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 CSHO as to whether compliance with the provision has been met.
 - b. A determination of "No" for any provision indicates noncompliance; thus, and "No" shall normally result in a citation for a violation of that provision.
 - c. The CSHO shall thoroughly document each such determination in the case file.
- J. Non-Mandatory Appendices to this Instruction. This PD 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, is intended as an aid to the Chief in planning resources for PQV and other PSM-related inspections.
- K. Evaluation. The Chief shall evaluate the effectiveness of this program starting in FY 1994. A report will be prepared for the Director no later than September 30, 1994 which will include, at a minimum, the following items:
1. The utility of the PSM audit guidelines used in Appendix A.
 2. An assessment of the accuracy of target information.
 3. An estimate of total resources (CSHO, supervisory, administrative and legal) that were required to conduct each inspection.
- L. 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 for additional guidance.