

DOSH DIRECTIVE

Division of Occupational Safety and Health

Department of Labor and Industries

Keeping Washington safe and working

24.40 Chemical Facility Process Safety Management NEP

Date: November 5, 2013

I. Purpose

This DOSH Directive implements OSHA's National Emphasis Program (NEP) for Chemical Facility Process Safety Management in the State of Washington. The purpose of the NEP is to reduce or eliminate workplace hazards associated with the catastrophic release of highly hazardous chemicals.

II. Scope and Application

This Directive applies to all DOSH operations statewide. It replaces all previous instructions on this issue, whether formal or informal.

This Directive cancels Directive 24.25, Chemical Facility Process Safety Management NEP (pilot).

This NEP does not apply to petroleum refineries (NAICS 32411). Facilities with a 32411 NAICS code will be inspected in accordance with DOSH Directive 24.50.

III. References

- **OSHA References:**

- [OSHA CPL 03-00-014 \(PSM Covered Chemical Facilities National Emphasis Program\)](#)
- [OSHA CPL 02-02-045 \(PSM of Highly Hazardous Chemicals- Compliance Guidelines and Enforcement Procedures\)](#)
- [OSHA CPL 02-00-094 \(OSHA Response to Significant Events of Potentially Catastrophic Consequences\)](#)

- **DOSH References:**

- [Chapter 296-67 WAC, Process Safety Management of Highly Hazardous Chemicals](#)
- [DOSH Compliance Manual](#)
- [DD 24.50, Process Safety Management Inspections](#)

IV. Acronyms

CFR	Code of Federal Regulations
DEP	Directorate of Enforcement Programs (OSHA)
DOSH	Division of Occupational Safety and Health
EPA	Environmental Protection Agency
HHC	Highly Hazardous Chemical
CSHO	Compliance Safety and Health Officer
IMIS	Integrated Management Information System
NAICS	North American Industry Classification System
NEP	National Emphasis Program
OSHA	Occupational Safety and Health Administration
PPE	Personal Protective Equipment
PSM	Process Safety Management
RMP	Risk Management Program (EPA)
WAC	Washington Administrative Code
WIN	WISHA Information Network

V. Background

OSHA promulgated its PSM standard in 1992 in response to a number of catastrophic incidents that occurred worldwide (see Process Safety Management of Highly Hazardous Chemicals; 29 CFR 1910.119). These incidents spurred broad recognition that handling highly hazardous chemicals could lead to incidents that may occur relatively infrequently, but, due to their catastrophic nature, often result in multiple injuries and fatalities.

On September 13, 1994, OSHA issued Instruction CPL-02-02-045, Process Safety Management of Highly Hazardous Chemicals – Compliance Guidelines and Enforcement Procedures. This instruction established policies, procedures, clarifications, and compliance guidance for enforcement of the PSM standard. The instruction acknowledged that Program Quality Verifications (PQVs) inspections were resource intensive and, therefore, OSHA would perform only a limited number each year. Consequently, very few PQV inspections have been conducted since Instruction CPL-02-02-045 was issued in 1994.

In July 2009, OSHA implemented a pilot NEP for PSM-covered chemical facilities. The pilot outlined a new approach for inspecting PSM-covered facilities that allowed for a greater number of inspections using better allocation of OSHA resources. Under the pilot, OSHA was able to increase the number of PSM facilities inspected with relatively limited resources.

Based on data collected and feedback from OSHA personnel, this Instruction outlines a slightly modified Chemical NEP that will be launched OSHA-wide.

VI. Enforcement Policies

A. Programmed Inspection Site Selection.

1. Scheduling Sources.

DOSH will use sources such as, but not limited to, the following for inspection scheduling:

- a. U.S. Environmental Protection Agency's (EPA) Chemical Accident Prevention Provisions, Program 3 Risk Management Plans (RMP) ¹
- b. Explosives manufacturing NAICS codes
- c. DOSH's WIN, and OSHA's IMIS, database
- d. DOSH Regional staff knowledge of local facilities
- e. rtknet.org (The Right-To-Know network).

The DOSH WIN (and OSHA IMIS) database will be used to identify facilities that have previously been cited for violations of the PSM standard. These facilities will be added to the inspection scheduling list.

A list of facilities with NAICS codes identical to those having previously been cited under the PSM standard will be created. These facilities will not be automatically added to the targeting list, but will be taken into consideration by DOSH staff when adding facilities based on knowledge.

2. Inspection Scheduling List.

- a. The Technical Services PSM Specialist will create an inspection scheduling list and update it annually.
- b. Deletions from the list will be made according to the following criteria:
 - Any facilities that are known to be out of business, documenting the basis for such determinations.
 - Any facility that is an approved participant in DOSH's *Voluntary Protection Program (VPP)* or DOSH Consultation's *Safety Through Achieving Recognition Together (START)*.
 - Any facility that has already received an inspection under this NEP in the last two years or is a facility with NAICS code 32411 (petroleum refineries).

¹ Facilities covered by EPA's Risk Management Program are considered to be Program 3 if they are covered by DOSH's PSM WAC 296-67.

- Any facilities that have received a comprehensive PSM inspection within the last two years.
- Deletions may be made for facilities having received a consultation. Refer to the DOSH Compliance Manual for further guidance.

3. Inspection Scheduling.

Statewide, a minimum of three inspections per year will be completed using this NEP.

Determinations about which businesses will be chosen from the scheduling lists will be based upon such factors as availability of DOSH resources, compliance and consultation history, nature and quantity of chemicals involved, age of facility, and incident history. Rationale for priority will be documented.

Assignments will be made by regional supervisors with input from Central Office staff and regional process safety specialists.

Inspections of explosives manufacturers must only be assigned after discussion with the explosives program technical expert.

B. SST and Unprogrammed Inspections.

1. SST Inspections.

Some establishments may also be selected for inspection under the current Site-Specific Targeting (SST) Plan. CSHOs must use this NEP for the comprehensive inspection of the selected PSM-covered process(es) at the facility. CSHOs may, after consulting with their supervisor, expand the PSM portion of the inspection beyond this notice if they determine that PSM deficiencies may exist outside of the selected unit or beyond the scope of the dynamic list questions.

2. Unprogrammed Inspections.

The following guidelines must be used for all unprogrammed inspection activities related to PSM-covered processes nationwide:

- a. Complaint or referral. If a formal complaint or referral is received relating to a PSM-covered process and it:
 - *Involves an application of the PSM standard* - the supervisor must evaluate the complaint or referral item(s) in the usual manner (DOSH Compliance Manual) and conduct an inspection using the PQV protocol.
 - *Does not involve an application of the PSM standard (for example, there is a complaint about PPE requirements in a PSM covered process)*- the inspection or inquiry will normally be limited to the complaint and referral item(s)/subject(s) only. However, if the facility has not already

been inspected, a concurrent inspection using the PQV protocol may be conducted at the supervisor's discretion.

- b. Accidents and Catastrophes. Responses to accidents and catastrophes in facilities that contain PSM-covered processes must follow the guidelines contained in the DOSH Compliance Manual and, where appropriate, in OSHA Instruction CPL 02-00-094, OSHA Response to Significant Events of Potentially Catastrophic Consequences in addition to the guidelines in the PQV protocol.

When an accident or catastrophe occurs in a facility that contains a PSM-covered process, and it:

- *Involves an application of the PSM standard* - an inspection will be conducted as per the DOSH Compliance Manual in addition to the guidelines in the PQV protocol.
- *Does not involve an application of the PSM standard* - the inspection will normally be limited to the accident investigation item(s)/subject(s) alone. However, if the facility has not already been inspected, a concurrent inspection using the PQV protocol may be conducted at the supervisor's discretion.

C. Inspection Resources.

Appropriate levels of staff experience, training, and preparation are essential for compliance activities relating to the PSM standard. Inspections using this NEP may be conducted by either a single DOSH employee or a team. At least one member of the team or the single DOSH employee must be qualified to Level 1 as described below.

Note: Due to a significant change in course content, completion of Course 330 prior to Fiscal Year 1991 does not meet this requirement for Level 1 training.

Level 1: Inspections of Ammonia Refrigeration Processes Only.

DOSH personnel may be assigned as Level 1 team members under this notice for inspections of ammonia refrigeration facilities, if:

- They have completed OSHA Training Institute's (OTI) Course 3300, *Safety and Health in the Chemical Processing Industries*, Course 3400, *Hazard Analysis in the Chemical Processing Industries*, **and**,
- They have completed advanced training such as OTI Course 3410, *Advanced Process Safety Management*, OTI Course 3430, *Advanced PSM in the Chemical Industries*, or a specialized course on ammonia refrigeration, **and**,
- They have prior experience including:

- Accident investigations in chemical, petrochemical, or refinery plants involving fires, explosions, and/or toxic chemical releases, or,
- Previous chemical inspections involving process safety management evaluations, or
- Previous chemical industry employment, or
- Participation in a PSM inspection of an ammonia refrigeration facility.

Level 1: Inspections of All Processes Except Ammonia Refrigeration.

DOSH personnel may be assigned as Level 1 team members under this notice, if they meet the criteria for any of the following options.

- Option 1:
 - They have completed OSHA Training Institute's (OTI) Course 3300, *Safety and Health in the Chemical Processing Industries*, Course 3400, *Hazard Analysis in the Chemical Processing Industries* and advanced training including either OTI Course 3410, *Advanced Process Safety Management*, or Course 3430, *Advanced PSM in the Chemical Industries*, **and**,
 - They have previous (DOSH, other government agency, or industry) chemical industry safety experience including: accident investigations in chemical, petrochemical or refinery plants involving fires, explosions, and/or toxic chemical releases, **or**,
 - They have previous (DOSH, other government agency, or industry) chemical inspection experience involving process safety management evaluations, or previous chemical industry employment involving process engineering, operations, safety, or maintenance.
- Option 2:
 - They have completed OSHA Training Institute's (OTI) Course 3430, *Advanced PSM in the Chemical Industries* or Course 3410, *Advanced Process Safety Management*, **and**,
 - They have 3 years experience working in a PSM-covered manufacturing facility (chemical, petrochemical, refining) in a process engineering, operations, safety, or maintenance position.

- Option 3:
 - They have completed OSHA Training Institute's (OTI) Course 3430, *Advanced PSM in the Chemical Industries* or Course 3410, *Advanced Process Safety Management*, **and**,
 - They have 7 years experience working for federal OSHA or an OSHA state plan program, **and**,
 - They have participated in more than 20 PSM and/or chemical plant inspections where they were the team leader equivalent in at least two of the inspections.

Level 2: Inspections of All Processes.

DOSH personnel may be assigned as inspection team members under this notice, if they meet the criteria for any of the following options:

- Option 1:
 - They have completed OTI course 3300, *Safety and Health in the Chemical Processing Industries* (including offerings of this course prior to fiscal year 1991) and OTI course 3400 *Hazard Analysis in the Chemical Processing Industries*, **and**,
 - They have 2 years of OSHA inspection experience or the equivalent, such as OSHA state plan program experience, EPA RMP experience, or U.S. Chemical Safety Board experience.
- Option 2:
 - They have 3 years of experience working in a PSM-covered manufacturing facility (chemical, petrochemical, refining) in a process engineering, operations, safety, or maintenance position.
- Option 3:
 - They have 7 years of federal OSHA or OSHA state plan program experience, **and**,
 - They have participated in more than 20 PSM and/or chemical plant inspections where they were the team leader equivalent in at least two of these inspections.

Level 3: Inspections of All Processes.

DOSH personnel who do not have the training and experience to qualify as Level 1 or 2 may be assigned to an inspection team under this notice, in the following circumstances:

- Level 3 team members must be under the direction of a Level 1 or 2 team member.
- Level 3 team members experienced in evaluating other programmatic

standards such as hazard communication, lockout/tagout, confined space entry, and respiratory protection programs may evaluate programmatic sections of the PSM standard.

- Level 3 team members may evaluate compliance with the following elements of the PSM standard:
 - Employee participation
 - Training
 - Contractors
 - Hot work permits
 - Incident investigation
 - Emergency planning and response

D. Inspection Process.

1. Dynamic List Questions.

CSHOs will select one or more units and use a dynamic list(s) of questions (referred to in this document as the dynamic list) to review PSM compliance.

- a. OSHA will develop dynamic lists in three categories: PSM General, Ammonia Refrigeration, and Chemical Processing. They will periodically issue new dynamic lists.
- b. For inspection integrity purposes, OSHA will not publicly disclose the dynamic lists. CSHOs must use the dynamic list(s) that is listed as “Effective” at the time of the opening conference. The dynamic lists will be made available to DOSH CSHOs via the secured PSM S-drive folder, Central Office staff, and regional process safety specialists. For inspection preparation purposes, OSHA will post the dynamic list(s) about 7 days before they become effective.

Example: The most recent dynamic list posted on the OSHA intranet site has an “Effective Date” of August 17. The previous dynamic list has an “Effective Date” of August 1. The inspection opening date is August 15th. In this case, CSHOs will use the August 1 dynamic list for the inspection because the opening date of the inspection is before the “Effective Date” of the August 17th dynamic list.

2. CSHOs must evaluate compliance with each item on the dynamic list.

3. Expanding the Inspection.

If during the compliance evaluation, CSHOs determine that PSM deficiencies may exist outside of the selected unit or dynamic list questions, the inspection may be expanded after consultation with the CSHO’s supervisor. CSHOs must document the basis for this determination.

4. Inspect Both Host and Contract Employers.

CSHOs must inspect both the host employer and contract employers, if any.

5. Review Inspection History and Abatement.

CSHOs must review the employer's history of DOSH inspections and any abatement verification submitted for citations resulting from those inspections.

E. Inspection Procedures.

1. Supplemented DOSH Compliance Manual Procedures.

The procedures given in the DOSH Compliance Manual must be followed except as modified in the following sections.

2. Opening Conference.

Where possible, the facility safety and health director, process safety manager, or other person capable of explaining the company's process safety management program must be asked to attend the opening conference.

The opening conference must also include the following:

- a. Verify PSM Applicability. CSHOs must confirm that the facility has a PSM-covered process.
 - CSHOs must request a list of the chemicals on site and their respective maximum intended inventories. CSHOs must review the list of chemicals and quantities, and determine if there are HHCs listed in WAC 296-67 Appendix A or flammable liquids or gases at or above the specified threshold quantity. CSHOs may ask questions, conduct interviews, or conduct a walkaround to confirm the information on the list of chemicals and maximum intended inventories.

If CSHOs determine that there are no HHCs, flammable liquids, or flammable gases present in sufficient quantities and the facility is not manufacturing explosives or pyrotechnics as defined in WAC 296-52, then, after updating their supervisor, they must document the finding and end the inspection (unless the business is also being inspected due to its presence on a SST list).
 - CSHOs must confirm that the facility is not a retail facility, oil or gas well drilling or servicing operation, or normally unoccupied remote facility (WAC 296-67-001(2)(b)). If the facility is one of these types of establishments, CSHOs should document their findings and end the inspection (unless the business is also being inspected due to its presence on a SST list).

- CSHOs must determine if other exemptions apply. According to WAC 296-67-001(2)(a)(ii), a process could be exempt if the employer can demonstrate that covered chemical(s) are:
 - Hydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating, gasoline for vehicle refueling), if such fuels are not a part of a process containing another highly hazardous chemical covered by the standard, **or**
 - Flammable liquids stored in atmospheric tanks or transferred which are kept below their normal boiling point without the benefit of chilling or refrigeration.

If management believes that the process is exempt, CSHOs must ask the employer to provide documentation or other information that demonstrates why the process is exempt.

- CSHOs may ask questions, conduct interviews, or conduct a walkaround to confirm that the exemption applies. If, at this point, they determine that the facility is either not covered or covered but exempted, then, after updating their supervisor, they must document the finding and end the inspection (unless the business is also being inspected due to its presence on a SST list).
- b. During the opening conference, CSHOs must familiarize themselves with the establishment's emergency response procedures and emergency alarms.
 - c. CSHOs must also request that the management representative(s) provide them with an overview of the processes/units at the facility, including block flow and/or process flow diagrams indicating chemicals and processes involved.
 - d. To understand the basics of the employer's processes and the possible catastrophic scenarios that could occur, the team should ask the management representative to explain worst case catastrophic release scenarios that might occur and what controls are in place to prevent them from happening.
 - e. During the opening meeting, CSHOs should determine the nature of the PSM-covered process.

If the process is:	Then use:
Ammonia Refrigeration Only	Ammonia Refrigeration dynamic list – the first 10 questions PSM General dynamic list– the first 5 questions
Storage Only	PSM General dynamic list – all questions
Chemical Processing and all other categories not listed above	Chemical Process dynamic list- the first 10 questions PSM General dynamic list – the first 5 questions

Each dynamic list contains approximately 10-15 primary and 5 secondary questions. CSHOs will choose the appropriate number of primary questions according to the table above. Questions that are deemed not appropriate should be replaced with secondary questions from the appropriate list. CSHOs should use the secondary list questions in the order that they are listed.

3. Documentation to be Requested -- General and Process Related.

CSHOs must request access to the documents listed below.

Compliance Guidance: The list below is not intended to limit the type and number of documents to be requested. The DOSH inspection team may request additional documents as necessary- even those that the employer has compiled which are not required by the standard. Examples of such documents include a list of all PSM-covered process/units in the complex and a summary description of the facility's PSM program.

Some requests require the employer to provide a list of information. The intent of first requesting a list versus complete documentation is to limit the amount of documents that the employer may have to produce.

Documents specifically required by a DOSH regulation are identified (). Documents identified (##) are requested after the Selected Unit is determined. In some cases, documentation may have been produced by a consultant or contractor.*

Row	Specifically Required By A DOSH Regulation	Requested After The Selected Unit Is Determined
1.	OSHA 300 logs for the previous three years for the employer and the process-related contractors.*	
2.	All contract employee injury and illness logs as required by 296-67-029(2)(f).*	
3.	<p>A list of all units and the maximum intended inventories* of all chemicals (in pounds) in each of the listed units.</p> <p><i>Compliance Guidance: 296-67-013(2)(a)(iii) requires the employer to have process safety information (PSI) for the maximum intended inventories of chemicals that are part of their PSM-covered processes.</i></p>	
4.	Unit process flow diagrams*.	
5.	Piping and instrumentation diagrams (P&IDs) including legends*##.	Piping and instrumentation diagrams (P&IDs) including legends*##.
6.	Unit Plot plans*.	
7.	Unit Electrical classification diagrams*##.	Unit Electrical classification diagrams*##.
8.	Process narrative descriptions*.	
9.	Descriptions of safety systems (e.g. interlocks,	Descriptions of safety systems (e.g.

Row	Specifically Required By A DOSH Regulation	Requested After The Selected Unit Is Determined
	detection or suppression systems)*##.	interlocks, detection or suppression systems)*##.
10.	Design codes and standards employed for process*##/equipment*## in the Selected Unit (s).	Design codes and standards employed for process*##/equipment*## in the Selected Unit (s).
11.		A list of all workers (i.e., hourly and supervisory) presently involved in operating the Selected Units(s) including names, job titles, work shifts, start date in the unit, and the name of the person(s) to whom they report (their supervisor)##.
12.	<p>The initial process hazard analysis*(PHA) and the most recent update/”redo” or revalidation* for the Selected Unit (s); this includes:</p> <ul style="list-style-type: none"> • PHA reports* • PHA worksheets* • Actions to address findings and recommendations promptly* • Written schedules for actions to be completed*, and • Documentation of findings and recommendations*##. <p><i>Compliance Guidance: Any PHA performed after May 25, 1987 that meets the</i></p>	Documentation of findings and recommendations* ##.

Row	Specifically Required By A DOSH Regulation	Requested After The Selected Unit Is Determined
	<i>requirements of 296-67-017 may be claimed by the employer as the initial PHA for compliance purposes, see 296-67-017(1)(e).</i>	
13.	Safe upper and lower operating limits for the Selected Unit (s)*##.	Safe upper and lower operating limits for the Selected Unit (s).*##
14.	A list by title and unit of each PSM incident report*;	All PSM incident reports for the selected unit*##.

4. PSM Overview.

Prior to beginning the initial walkaround inspections, the team must request an explanation of the company's PSM programs including, but not limited to:

- a. A briefing on the PSM program components and how the facility implements them;
- b. Identification by name and position of personnel responsible for implementing the standards' various elements;
- c. A description of company records used to verify compliance with standards; and
- d. A review of the written summary description of the PSM program.

5. Personal Protective Equipment (PPE) and Camera/Video Use.

In addition to normal inspection protective equipment, CSHOs conducting these inspections must be provided with flame-retardant coveralls for protection from flash fires.

- a. CSHOs must 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.

Clothing made of hazardous synthetic fabrics may melt causing severe burns, and should not be worn underneath flame-retardant coveralls. All garments worn under flame-retardant coveralls must be made of 100% cotton or other non-synthetic fibers.

- b. Prior to the initial walkaround inspections, CSHOs must review the employer's procedures for PPE selection and allowable electronic equipment in the Selected Unit (s) and/or areas of the facility CSHOs will be inspecting. CSHOs shall ensure that these procedures and the associated PPE selection have been prepared in accordance with the PSM standard as well as [WAC 296-800-160, Personal Protective Equipment](#).

The facility-required PPE and flame-retardant coveralls (where flash fires are possible) are the baseline PPE requirements for CSHOs conducting walkaround inspections.

- If the facility requires a respirator, or if, in a CSHO's judgment, a respirator should be worn, then each CSHO must receive proper training and qualification prior to using their respirator.
- For electrically classified areas, CSHOs must ensure that cameras (still or video) are intrinsically safe.

Note: CSHOs may use cameras equipped with a telephoto lens from outside classified areas and/or still cameras without batteries or a flash.

If the employer allows the use of non-intrinsically safe cameras in hazardous (classified) locations, CSHOs may use this type of equipment when: 1) the employer issues a hot work permit for the use of the camera; and 2) continuous combustible gas metering, which has been calibrated prior to use, is provided in the areas where the camera will be used.

- CSHOs must ensure that all electronic devices such as cell phones, PDAs, etc., are turned off.

6. Initial Walkaround.

After the opening conference, the inspection may begin with a brief initial walkaround inspection of those portions of the facility within the scope of the PSM standard. During the initial walkaround CSHOs are advised to:

- a. Look for differences between what was presented in the PSM overview discussion and actual conditions;
- b. Gather information to aid in the selection of the process unit(s) to be inspected;
- c. Obtain a basic overview of the facility's operations;
- d. Observe potential hazards including, but not limited to, pipe work at risk of impact, corroded or leaking equipment, unit or control room siting and trailer location, relief devices and atmospheric vents that discharge to atmosphere, and ongoing construction and maintenance activities;
- e. Solicit input from employees and their representatives and contract employees concerning potential PSM program deficiencies.

Compliance Guidance: Additional walkaround activity will be necessary after the Selected Unit(s) is/are identified.

7. Selection of Unit.

The Team Leader must select a PSM-covered process or processes to evaluate for compliance with the standard. For large continuous processes, the Team Leader may select a portion of the covered process, for example, a unit operation within the covered process. The selected process or portion thereof must be referred to as the Selected Unit.

CSHOs may select more than one unit if they feel it is necessary, to get a representative sample of the facility's covered processes based on the size and complexity of the facility. The selection should be based on the factors listed below, and must be documented in the case file:

- a. Nature (e.g., risk of releasing flammables, high-toxicity substances present, high operating pressures and temperatures) and quantity of chemicals involved
- b. Incident reports, near-miss investigation reports, emergency shutdown records, and other history
- c. Lead operator's input
- d. Age of the process unit
- e. Factors observed during the walkaround

- f. Worker representative input
- g. Number of workers present
- h. Current hot work, equipment replacement, inspection, test and repair records, or other maintenance activities
- i. Compliance audit records, including open and pending items
- j. List of contractors.

Compliance Guidance: It is not intended that the unit selection be a resource-intensive activity. The criteria listed above are intended to be used as a guide. The Team Leader should attempt to identify the most hazardous process using these criteria; however, he/she can use discretion in choosing the Selected Unit.

8. Inspection of Contractors.

If the facility is using contractors in PSM covered operations:

All contractors (including subcontractors) working on or adjacent to the Selected Unit must be inspected. CSHOs must use the applicable questions in the dynamic list when evaluating contract employer compliance.

If there are no contractors working on or adjacent to the Selected Unit throughout the course of the inspection, the Team Leader will choose an additional PSM-covered process where contractors are known to be working and inspect those contractors.

9. Compliance Guidelines.

Guidelines for assessing and verifying compliance with PSM standard provisions are provided in the dynamic list. When conducting PSM compliance evaluations of the Selected Unit:

- a. Following the Dynamic List. CSHOs must use the guidance given in the dynamic list. The dynamic list-based evaluation of this NEP is a mandatory gap analysis formatted in a series of questions to facilitate the evaluation of various requirements of the PSM standard. Instructions for using the dynamic list are provided in Appendix A.
- b. Expanded Inspection. If, during the course of the evaluation, the Team Leader determines that deficiencies outside of the selected unit or dynamic list questions may exist in the employer's PSM compliance, he/she must consult his or her direct supervisor and may expand the inspection to other units or areas. CSHOs must document the basis for this determination and include the supportive documentation in the case file.
- c. Hazardous Conditions or Violations Not Addressed by Dynamic List.

CSHOs may recommend citations for hazardous conditions or violations of DOSH standards, including “Safe Workplace” (WAC 296-800-110), found during the inspection regardless of whether they are specifically addressed in this Notice.

10. Review Inspection History and Abatement.

During the course of the inspection, the CSHO must review abatement for all PSM citations issued within the previous 6 years to determine whether the hazard still exists. If a hazard exists, the CSHO must determine whether there has been a failure to abate in accordance with the DOSH Compliance Manual, and issue a citation for failure to abate as appropriate.

In cases where a follow-up inspection has been completed since the abatement was in place, it is not necessary for the CSHO to review the abatement.

11. Citations.

Citations for violations must be issued in accordance with the DOSH Compliance Manual. The following additional directions must be used for citations of PSM violations:

- a. The requirements of the PSM standard are intended to eliminate or mitigate catastrophic releases of HHC. The provisions of the standard present closely interrelated requirements, emphasizing the application of management controls when addressing the risks associated with handling or working near HHC.
- b. Any violation of the PSM standard is a condition that could kill or seriously harm employees.
- c. Violations of the PSM standard must **not** normally be classified as “general”.

F. Outreach.

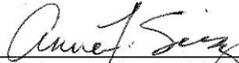
The DOSH Education and Outreach Program will develop information about the NEP, hazards, and prevention resources and distribute the information to affected Washington State employers, business, and labor associations.

G. WIN Coding Instructions.

The instructions that follow are for inspections under this NEP.

1. All enforcement activities conducted under this NEP must be coded with the NEP code "CHEMNEP".
2. All inspections of contractors initiated as a result of a Programmed inspection of the host employer will be identified as Program Related.
3. All consultation activities conducted in response to this NEP must also include the "CHEMNEP" code.

Approved:



Anne F. Soiza, Assistant Director
Division of Occupational Safety and Health
Department of Labor and Industries

APPENDIX A

CSHO Instructions for the Dynamic Lists

Background and Description. CSHOs must use the appropriate Dynamic List as described in Section E.2 of this notice. The Dynamic Lists are found on the DOSH S-drive in a secured-access folder, and contain a series of dynamic questions which will be periodically changed while this NEP notice is active.

This list based evaluation is a gap analysis formatted in a series of questions that have been developed to assess and verify the employer's PSM compliance with specific issues such as design, fabrication, installation, startup, operation, maintenance, change, controls (engineering and administrative), safe work practices, contractor safety, etc., at the facility by examining a Selected Unit.

CSHO Instructions. The questions are designed to elicit "Yes", "No", or "N/A" for determination by CSHOs of PSM compliance. CSHOs must mark

- "Yes" when the employer has met the requirements of the question,
- "No" when the employer has **not** met the requirements of the question, or
- "N/A" if the question is not applicable.

A determination of "No" for any question may indicate noncompliance if the employer does not have an acceptable alternative in place. Therefore, any "No" must normally result in a citation for a violation of the indicated provisions provided that the other *prima facie* elements (a hazard exists, a DOSH standard applies, employer knowledge of the hazard, and worker exposure to the hazard) of a violation are established. Each question lists one or more possible citations.

However, CSHOs are not limited to this list. Based on the fact finding, other citations for violations may be more appropriate. CSHOs must thoroughly document each "No" determination in the case file.

Because of the interrelationship of the PSM elements, CSHOs may find that under some circumstances more than one provision of the standard may be applicable. The following excerpt from CPL 02-02-045 demonstrates the interrelationship of the PSM elements:

"Interrelationship of Elements.

An essential part of verifying program implementation is to audit the flow of information and activities among the elements. When information in one element is changed or when action takes place in one element that affects other elements, CSHOs must review a sample of the related elements to see if the appropriate changes and follow-up actions have taken place.

The following example demonstrates the interrelationship among the elements:

During a routine inspection of equipment (Mechanical Integrity), the maintenance worker discovers a valve that no longer meets the applicable code and must be changed. Because the type of valve is no longer made, a different type of valve must be selected and installed (Management of Change). The type of valve selected may mandate different steps for the operators (Operating Procedures) who will require training and verification in the new procedures (Training). The rationale for selecting the type of valve must be made available for review by employees and their representatives (Employee Participation).

When the new valve is installed by the supplier (Contractors), it will involve shutting down part of the process (Pre-startup Safety Review) as well as brazing some of the lines (Hot Work Permit). The employer must review the response plan (Emergency Planning) to ensure that procedures are adequate for the installation hazards.

Although Management of Change provisions cover interim changes, after the new valve is in place the Process Safety Information will have to be updated before the Process Hazard Analysis is updated or revalidated, to account for potential hazards associated with the new equipment. Also, inspection and maintenance procedures and training will need to be updated (Mechanical Integrity).

In summary, 11 PSM elements can be affected by changing one valve. CSHOs would check a representative number of these elements to confirm that the required follow-up activities have been implemented for the new valve.”

Given the catastrophic nature of the hazards associated with PSM, the PSM elements work together to help ensure that if the employer is deficient in one PSM element, the other elements, if complied with, prevent or mitigate a catastrophic incident. Consequently, the PSM standard uses a ‘one hazard-several abatements’ approach to ensure that PSM-related hazards are adequately controlled.

Abatement requirements include:

- Management system/program requirements – e.g., the employer must develop mechanical integrity program procedures that include piping inspection procedures, 296-67-037(2), and
- Specific employer action/task abatement requirements -e.g., the employer must inspect the piping, 296-67-037(4).

Therefore, to assure that all the employer’s process safety management systems/elements are being fully implemented, CSHOs should consider citing all applicable violations. Grouping these violations may be appropriate; see the DOSH Compliance Manual.

In some cases, CSHOs may determine that the answer to a question is “No” because the employer uses other means to comply with the specific standards. In this case, the employer must demonstrate that its performance meets the requirements of the standard.