OSHA NOTICE

U.S. DEPARTMENT OF LABOR Occupational Safety and Health Administration

DIRECTIVE NUMBER: 09-06 (CPL 02)	**EFFECTIVE DATE:** July 27, 2009
SUBJECT:	**PSM Covered Chemical Facilities National Emphasis Program**

ABSTRACT

Purpose: This notice describes policies and procedures for implementing a pilot National Emphasis Program (NEP) to reduce or eliminate the workplace hazards associated with the catastrophic release of highly hazardous chemicals.

Scope: This notice applies OSHA-wide. Programmed inspections will take place in Regions I, VII and X. Unprogrammed inspections will take place OSHA-wide.

References: See Paragraph III.

State Impact: Notice of Intent required. Adoption optional. See paragraph VII.

Action Offices: National, Regional, and Area Offices (AOs).

Originating Office: Directorate of Enforcement Programs (DEP).

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By and Under the Authority of

Jordan Barab
Acting Assistant Secretary

Executive Summary

This notice provides guidance to Occupational Safety and Health Administration (OSHA) national, regional, and area offices for implementing an NEP to reduce or eliminate workplace hazards associated with the catastrophic release of highly hazardous chemicals. The programmed inspections associated with this program will be done in Regions I, VII and X. Unprogrammed inspections associated with this program will be done in all regions.

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I. Purpose.

This notice describes an OSHA National Emphasis Program (NEP) for inspecting facilities with highly hazardous chemicals (HHCs) in amounts at or greater than the threshold quantities listed in 1910.119. Programmed inspections[1] will take place in Regions I, VII, and X in facilities that are known to OSHA as having a risk of catastrophic releases. Unprogrammed inspections[2] will take place in all OSHA Regions. This notice contains policies and procedures to verify employers' compliance with OSHA's Process Safety Management (PSM) of Highly Hazardous Chemicals standard, 29 CFR 1910.119.

II. Scope.

This notice applies OSHA-wide.

III. References.

A. Federal Register, Volume 57, Number 36, pages 6355 to 6417, (including Preamble) February 24, 1992, *Final Rule, Process Safety Management (PSM) of Highly Hazardous Chemicals 29 CFR 1910.119; Explosives and Blasting Agents standard*; 29 CFR 1910.109.

B. CPL 02-02-045 – (formerly CPL 2-2.45A CH-1) - *Process Safety Management of Highly Hazardous Chemicals -- Compliance Guidelines and Enforcement Procedures*, September 13, 1994

C. 29 CFR 1910.106, *Flammable and Combustible Liquids*

D. 29 CFR 1910.146, *Permit-Required Confined Spaces*

E. 29 CFR 1910.147, *The Control of Hazardous Energy (Lockout/Tagout)*

F. 29 CFR 1910, *Subpart I, Personnel Protective Equipment*

G. 29 CFR 1910.307, *Hazardous (Classified) Locations*

H. OSHA Instruction CPL 02-00-148 , *Field Operations Manual (FOM)*, January 9, 2009

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1 Programmed inspections are defined in *CPL 02-00-148Field Operations Manual*as "inspections of worksites which have been scheduled based upon objective or neutral selection criteria."
2 Unprogrammed inspections are defined in *CPL02-00-148 Field Operations Manual* as "inspections scheduled in response to alleged hazardous working conditions that have been identified at a specific worksite."

I. OSHA Instruction ADM 03-01-005 OSHA Compliance Records, August 3, 1998

J. CPL 02-00-025 - CPL 2.25I - *Scheduling System for Programmed Inspections*, January 4, 1995

K. OSHA Instruction CPL 02-01-037 (CPL 2-1.037), *Compliance Policy for Emergency Action Plans and Fire Prevention Plans*, July 9, 2002

L. Current *Site-Specific Targeting*

M. OSHA Instruction CPL 02-00-094 (CPL 2.94), *OSHA Response to Significant Events of Potentially Catastrophic Consequences*, July 22, 1991

N. OSHA PSM Safety and Health Topics website, http://www.osha.gov/SLTC/processsafetymanagement/index/html

O. *Accidental Release Prevention Requirements - Risk Management Programs Under the Clean Air Act*, U.S. Environmental Protection Agency's (EPA) standard, 40 CFR Part 68, Chemical Accident Prevention Provisions

P. Chemical NEP Dynamic Lists, OSHA Intranet website, http://intranet.osha.gov/compliance/dep-psm.html

IV. Expiration.

This Notice will expire one year after its date of issue.

V. Action Offices.

OSHA Regional Administrators (RA) must ensure that the policies and procedures set forth in this notice are followed.

VI. Application.

OSHA compliance officers shall follow the procedures contained in this notice when inspecting the facilities selected under this NEP. This NEP does not apply to facilities with a 32411 NAICS code. For facilities with a 32411 NAICS code, please refer to the Petroleum Refinery Process Safety Management NEP.

VII. Federal Program Change. Notice of Intent Required. Adoption Optional.

This notice describes a year-long Federal program change that establishes a National

Emphasis Program (NEP) for inspecting facilities with quantities of highly hazardous chemicals (HHCs) at or above the threshold quantities defined in 1910.119 and sets out new procedures, which include a dynamic list of questions, for inspecting PSM covered processes. These procedures will be used for programmed inspections at sites selected for the NEP in Regions I, VII, and X, and for unprogrammed and site-specific targeted PSM inspections (refineries are not included in this NEP) in all Regions. States may participate in this emphasis program and/or may choose to use these procedures in their inspections of PSM covered processes even if not participating. Notice of intent regarding this directive is required.

A. Notice of Intent.

The State's notice of intent must indicate:

1. whether the State will participate in this pilot by using the inspection process and procedures described in paragraph X.D. and paragraph X.E. in its inspections of the PSM covered processes in its targeted and unprogrammed inspections; and

2. whether the State will initiate a new or modify an existing emphasis program for chemical plants handling large quantities of highly hazardous chemicals using the dynamic list of questions and inspection procedures.

If the State adopts an identical emphasis program and/or adopts the pilot inspection procedures for its PSM inspections, it must provide the date of adoption to OSHA. If the State modifies its PSM inspection procedures to reflect any aspects of this directive, the State may either post its different emphasis program and/or procedures on its State website and provide the link to OSHA, or provide a copy to OSHA with information on how the public may receive a copy. OSHA will provide summary information on the State responses to this instruction on its website.

B. Procedures.

OSHA will make the establishment lists described in paragraph X.A. and the dynamic list of questions available to interested States. States must code any inspections (programmed or unprogrammed) conducted using this NEP as directed in section X.H. States using the procedures in this instruction are asked to provide the feedback set out in section X.F. to the Directorate of Enforcement Programs through their Regional Offices in order to assist OSHA in evaluating this program.

VIII. Background.

OSHA promulgated the 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.

This NEP outlines a new approach for inspecting PSM covered facilities. This approach allows for a greater number of inspections by better allocation of OSHA's resources.

This NEP will be effective for one year. The NEP will apply to unprogrammed inspections related to employer PSM-covered processes OSHA-wide. Programmed inspections under this NEP will take place in Regions I, VII and X. After one year, this pilot NEP will be evaluated and considered for renewal and expansion to other regions.

IX. Acronyms.

A. AAD – Assistant Area Director (OSHA)

B. AD – Area Director (OSHA)

C. AO – Area Office (OSHA)

D. CSHO – Compliance Safety and Health Officer

E. DEP – Directorate of Enforcement Programs (OSHA National Office)

F. EPA - U.S. Environmental Protection Agency

G. FOM – Field Operations Manual

H. HAZWOPER – Hazardous Waste Operations and Emergency Response

I. HHC – Highly Hazardous Chemical

J. LFL – Lower Flammable Limit

K. NAICS – North American Industrial Classification System

L. NEP – National Emphasis Program

M. NO – National Office (OSHA)

N. RA – Regional Administrator (OSHA)

O. RAGAGEP – Recognized and Generally Accepted Good Engineering Practices

P. RMP – Risk Management Plans (U.S. EPA)

Q. RO – Regional Office (OSHA)

X. Program Procedures.

A. Programmed Inspection Site Selection (Applies to Regions I, VII, and X Only).

1. Targeting Sources.

OSHA will use four sources for targeting:

a. U.S. Environmental Protection Agency's (EPA) Chemical Accident Prevention Provisions, Program 3 Risk Management Plans (RMP) [3],

b. Explosives manufacturing NAICS codes,

c. OSHA's IMIS database, and

d. OSHA Area Office knowledge of local facilities.

2. Facility Identification and Master List Generation.

a. DEP shall create Category 1, 2, and 3 Lists of NAICS Codes by:

- obtaining a list of facilities that submitted a Program 3 RMP, and selecting NAICS codes where a substantial number of facilities

3 Facilities covered by EPA's Risk Management Program are considered to be Program 3 if they are covered by OSHA's PSM 1910.119.

were required to submit a Program 3 RMP;

- adding NAICS codes for explosive manufacturing;
- adding NAICS codes from facilities identified in the IMIS database as having previously been cited under PSM;
- dividing the list of NAICS codes into 3 categories: Category 1 – Facilities likely to have ammonia used for refrigeration as the only HHC; Category 2 – Facilities likely to have chlorine used for water treatment as the only HHC; Category 3 – Facilities likely to have both ammonia and chlorine, ammonia or chlorine used for other than refrigeration or water treatment, or HHCs other than ammonia or chlorine.

b. The Office of Statistics shall create Category 1, 2, and 3 lists of establishments that include:

- facilities from the DEP list of Program 3 RMP facilities in NAICS codes where a substantial number of facilities are covered;
- all known establishments with the NAICS codes identified as explosive manufacturing;
- facilities identified in the IMIS database as having received prior PSM citations.

These lists will be combined into a national list and posted on the OSHA DEP Intranet website.

c. Each RO shall prepare local Category 1, 2, and 3 master lists of facilities. Based on their familiarity with local facilities, ROs and AOs shall:

- Add facilities that are not on the national list, are known by the region to operate in their jurisdiction, and are known to the region to be PSM-covered.
- Delete any facilities that are known to be out of business, documenting the basis for such determinations;
- Delete any facility that is an approved participant in OSHA's Voluntary Protection Program (VPP) or OSHA Consultation's Safety and Health Achievement Recognition Program (SHARP); or

- Delete any facility that has already received an inspection under this NEP or is a facility with NAICS code 32411 (petroleum refineries);

- Delete any facilities that have received a comprehensive PSM inspection within the last two years.

The RO must maintain their master lists for three years after the completion of all of the inspections conducted under this NEP. (See OSHA Instruction ADM 03-01-005 OSHA Compliance Records.)

3. Inspection Scheduling

a. Regions I, VII and X should each complete an average of 5-10 programmed inspections per AO per year using this NEP.

b. Each Region I, VII, and X AO shall randomly select inspection sites from their master lists. (I.A.2.c)

c. In order to ensure that inspections are appropriately allocated across all hazardous processes, they should consist of 50% from the Category 3 Master List, 25% from the Category 1 Master List, and 25% from the Category 2 Master List. In a Region where this is not possible due to the types of facilities in its jurisdiction, the mix of facilities may be adjusted as necessary.

B. SST and Unprogrammed Inspections (Applies to all OSHA Regions).

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 PSM-covered process(es) at the facility. CSHOs may, after consulting with the Area Director, expand the PSM portion of the inspection beyond this notice if they determine that PSM deficiencies may exist outside of the selected unit or dynamic list questions.

2. Unprogrammed Inspections.

The following guidelines shall 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 AD shall evaluate the complaint or referral item(s) in the usual manner (CPL 02-00-148 – Field Operations Manual) and conduct an inspection using this notice.

- *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 using this notice, a concurrent inspection using this NEP may be conducted at the AD's discretion.

b. Accidents and Catastrophes. Responses to accidents and catastrophes in facilities that contain PSM-covered processes shall follow the guidelines contained in CPL 02-00-148 – Field Operations Manual and, where appropriate, in OSHA Instruction CPL 02-00-094, *OSHA Response to Significant Events of Potentially Catastrophic Consequences* in addition to this Notice's guidelines.

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 CPL 02-00-148 in addition to this notice.

- *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 using this notice, a concurrent inspection using this NEP may be conducted at the AD'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 OSHA employee or a team. At least one member of the team or the OSHA employee must be qualified to Level 1 as described below. For inspections that fall into Category 1 – Facilities that use only ammonia for refrigeration, Level 1 requirements are specified under Ammonia Refrigeration Level 1:

1. Inspection Team Personnel

a. Level 1

- OSHA personnel may be assigned as Level 1 team members under this notice, 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 advanced training such as OTI Course 3430, *Advanced PSM in the Chemical Industries* or Course 3410, *Advanced Process Safety Management.*

  (At the time of this writing, OTI is developing Course 3430, which will cover issues particular to the types of industries covered by this NEP. Given the wide variety of processes found in chemical processing industries, Level 1 personnel are strongly encouraged to attend Course 3430 when it is opened for enrollment.)

  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.

And,

- They have prior experience with chemical industry safety 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.

b. Ammonia Refrigeration Level 1

OSHA 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*.

Note: Due to a significant change in course content, completion of Course 3300 prior to Fiscal Year 1991 does not meet this requirement for Level 1 training.

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.

c. Level 2

OSHA personnel may be assigned as inspection team members under this notice, if:

- they have two years of OSHA inspection experience or the equivalent; and
- 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.*

d. Level 3

OSHA 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 the following elements of PSM:
  - (c) employee participation
  - (g) training
  - (h) contractors
  - (k) hot work permits
  - (m) incident investigation
  - (n) emergency planning and response

2. Utilization of Other OSHA Technical and Enforcement Resources.

CSHOs and other inspection team members will fully utilize RO and NO (DEP, DSG, and DTSEM) technical and enforcement support resources when making decisions regarding compliance or noncompliance.

3. Industry Reference Material Availability.

OSHA's PSM Safety and Health Topics Website lists documents that will be useful for PSM inspections in addition to the list of documents found in Appendix D of CPL 02-02-045. ROs should consult with their Regional PSM Coordinators to identify which industry documents are necessary to support their enforcement activities.

Each RO library must have industry reference documents available for CSHOs to use during the inspection. AO jurisdictions that conduct a large number of PSM inspections should have these industry reference

documents in their own libraries.

D. Inspection Process.

1. NEP Inspection Process Different From PSM CPL PQV Process.

This NEP differs from the program-quality-verification (PQV) approach in PSM CPL 02-02-045. Inspections done using the PQV are broad and open-ended, while inspections using this notice rely on specific investigative questions. The investigative questions are designed to gather facts related to requirements of the PSM standard, and include guidance for reviewing documents, interviewing employees, and verifying implementation.

2. Emphasis on Implementation over Documentation.

Based on past inspection history at refineries and large chemical plants, OSHA has found that employers may have an extensive written process safety management program, but insufficient program implementation. Therefore, CSHOs should verify the implementation of PSM elements to ensure that the employer's actual program is consistent with their written program.

3. Dynamic List Questions.

CSHOs will select one or more units (I.E.7) and use a dynamic list (s) of questions (referred to in this document as the dynamic list) to review PSM compliance.

a. DEP will develop dynamic lists in five categories: PSM General, Ammonia Refrigeration, Water and/or Wastewater Treatment, Storage, and Chemical Processing. DEP will periodically change the questions on the dynamic lists.

b. For inspection integrity purposes, OSHA will not publicly disclose the dynamic lists. The dynamic lists will only be posted on OSHA's DEP/PSM intranet website. CSHOs must download and use the dynamic list (s) that is listed as "Effective" at the time of the opening conference. For inspection preparation purposes, DEP will post the dynamic list(s) about 7 days before they become effective.

Example: The most recent dynamic list posted on the DEP 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.

Note: CSHOs who cannot download the dynamic list should contact DEP.

c. CSHOs must evaluate compliance with each item on the dynamic list developed in accordance with the requirements contained in Section X.E.2.d.

4. 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 Area Director. CSHOs shall document the basis for this determination.

5. Inspect Both Host and Contract Employers.

CSHOs must inspect both the host employer and contract employers for compliance using the dynamic lists.

E. Inspection Procedures.

1. Supplemented FOM Procedures.

The procedures given in OSHA Instruction CPL 02-00-148, *Field Operations Manual*, Chapter 3, shall 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 shall be asked to attend the opening conference. The opening conference must also include the following:

a. Verify PSM Applicability. CSHOs shall confirm that the facility has a PSM-covered process.

- CSHOs shall request a list of the chemicals on site and their respective maximum intended inventories. CSHOs shall review the list of chemicals and quantities, and determine if there are HHCs listed in 1910.119 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 1910.109, then, after updating the RO, they shall document the finding and end the inspection.

- CSHOs shall confirm that the facility is not a retail facility, oil or gas well drilling or servicing operation, or normally unoccupied remote facility (1910.119(a)(2)). If the facility is one of these types of establishments, CSHOs should document their findings and end the inspection.

- CSHOs shall determine if other exemptions apply. If management believes that the process is exempt, CSHOs shall ask the employer to provide documentation or other information that demonstrates why the process is exempt.

- According to 1910.119 (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.

- 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 the RO, they shall document their finding and end the inspection.

b. During the opening conference, CSHOs shall familiarize themselves with the establishment's emergency response procedures and

emergency alarms.

c. CSHOs shall 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
Water and/or Wastewater Treatment Only	Water and Wastewater treatment 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.

During the opening conference, CSHOs shall request access to the documents listed below. During the evaluation portion of the inspection, CSHOs shall request copies of the documentation, as appropriate, to substantiate citations.

Compliance Guidance: The list below is not intended to limit the type and number of documents to be requested. The OSHA inspection team may request additional documents as necessary.

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.

The following list represents documents typically compiled by employers with PSM-covered processes at their facilities. The PSM standard requires the employer to maintain some, but not all, of these documents. Therefore, the employer may not have all of these documents. Documents specifically required by an OSHA regulation are identified (*). Documents identified (##) are documents that will be requested after the Selected Unit is determined. In some cases, documentation may have been produced by a consultant or contractor.

a. All contract employee injury and illness logs as required by 1910.119(h)(2)(vi).*

b. A list of all PSM-covered process/units in the complex.

c. A list of all units and the maximum intended inventories* of all chemicals (in pounds) in each of the listed units.

Compliance Guidance: 1910.119(d)(2)(i)(C) requires the employer to have process safety information (PSI) for the maximum intended

inventories of chemicals that are part of their PSM-covered processes.

d. A summary description of the facility's PSM program.

e. Unit process flow diagrams*.

f. Piping and instrumentation diagrams (P&IDs) including legends*##.

g. Unit Plot plans*.

h. Unit Electrical classification diagrams*##.

i. Process narrative descriptions*.

j. Descriptions of safety systems (e.g. interlocks, detection or suppression systems)*##.

k. Design codes and standards employed for process*##/equipment*## in the Selected Unit (s).

l. A list of all employees (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)##.

m. The initial process hazard analysis*(PHA) and the most recent update/"redo" or revalidation* for the Selected Unit (s); this includes PHA reports*, PHA worksheets*, actions to address findings and recommendations promptly*, written schedules for actions to be completed*, and documentation of findings and recommendations*. ##

Compliance Guidance: Any PHA performed after May 25, 1987 that meets the requirements of 1910.119(e) may be claimed by the employer as the initial PHA for compliance purposes, see 1910.119(e)(1)(v).

n. Safe upper and lower operating limits for the Selected Unit (s).

4. <u>PSM Overview</u>.

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

a. A briefing on the PSM standard's 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 shall be provided with flame-retardant coveralls for protection from flash fires.

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 may melt causing severe burns, and should not be worn underneath flame-retardant coveralls. CSHOs shall wear undergarment made of 100% cotton or other non-synthetic fibers.

b. Prior to the initial walkaround inspections, CSHOs must review the employer's operating procedures for PPE selection 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 1910, Subpart I, *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 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 shall 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 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 should:

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 identified.

7. Selection of Unit.

The Team Leader shall 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 shall be referred to as the Selected Unit. CSHOs may

select more than one unit if he or she feels 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 shall 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 and other history;

c. Lead operator's input;

d. Age of the process unit;

e. Factors observed during the walkaround;

f. Employee representative input;

g. Number of employees present;

h. Current hot work, equipment replacement, or other maintenance activities.

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.

All contractors (including subcontractors) working on or adjacent to the Selected Unit shall be inspected. CSHOs shall 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 another PSM-covered process where contractors are known to be working and inspect those contractors as defined by the requirements of the above paragraph.

Compliance Guidance: Construction contractors working on or adjacent

to the Selected Unit(s) must also be inspected as per the above paragraph.

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. 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 shall consult with the Area Director (AD) and may expand the inspection to other units or areas. CSHOs shall document the basis for this determination.

c. Hazardous Conditions or Violations Not Addressed by Dynamic List. CSHOs may recommend citations for hazardous conditions or violations of OSHA standards found during the inspection regardless of whether they are specifically addressed in this Notice.

10. Citations.

Citations for violations shall be issued in accordance with CPL 02-00-148 – *FOM*. The following additional directions shall 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 shall **not** normally be classified as "other-than-serious".

F. Program Evaluation.

This NEP will be evaluated using data collected from case files and follow-up site visit reports submitted by each AO, through the Region, to the Office of General Industry Enforcement (GIE) in the DEP.

The AO will submit inspection data for each inspection conducted under this NEP every three months (or sooner if the AO prefers, e.g., after the citations are issued). AO's may fulfill this requirement by submitting a copy of the dynamic question worksheet, provided that it includes the information requested below. This reporting will continue until this Notice expires.

Information to be provided in the AO reports includes:

1. A copy of the OSHA 1;

2. The facility category as defined in X.A.2.a;

3. The facility NAICS code, process type, and covered chemical and quantity, or reason for exemption from PSM coverage;

4. The dynamic list questions asked during the inspection, resulting citations including AVDs, and the name and effective date of the list that the questions came from;

5. A listing of the questions used that were not applicable;

6. A listing of the Selected Unit (s) that was evaluated for compliance during the NEP inspection;

7. The number of CSHOs involved in the inspection and their training level;

8. The number of hours required for CSHOs to complete the inspection;

9. A list of all inspections (including employer name, address, and NAICS code) that were closed because there was no PSM covered process.

G. Outreach.

The OSHA Training Institute, in conjunction with the DEP and the Office of Public Affairs, will develop chemical plant PSM information and training materials. This information will be made available to the ROs for distribution to the AOs and Consultation Program offices. Each AO and RO in Regions I, VII,

and X is encouraged to develop outreach programs that will support their enforcement efforts. Suggested outreach products and activities include the following:

1. Letters and news releases announcing the implementation of this Notice.

2. Seminars on chemical plant process safety topics tailored for specific audiences, such as employers, employee groups, local trade unions, apprentice programs, equipment manufacturers, and material suppliers.

3. Working with OSHA's cooperative program participants, including Voluntary Protection Programs, Strategic Partnership, and Alliance Program participants, to share success stories and technical information concerning effective means of controlling and reducing or eliminating potential catastrophic releases of HHCs. For example, the OSHA and Process Safety Alliance (whose signatories include major chemical industry associations) address chemical safety and process safety by developing and sharing compliance assistance resources with employers and employees to help prevent injuries and fatalities in the chemical industry. Through these and other alliances, OSHA can disseminate agency compliance assistance resources as well as work with Alliance Program participants to develop and disseminate additional resources to support agency efforts.

H. IMIS Coding Instructions.

1. The instructions that follow are for inspections under this NEP.

2. All enforcement activities--inspections, complaints, accidents, referrals, and compliance assistance (OSHA 55)--conducted under this NEP must be coded with the NEP code "CHEMNEP" entered in the appropriate NEP field/item # on the respective forms.

   a. All inspections of contractors initiated as a result of a Programmed inspection of the host employer will be identified as Program Related.

   b. The OSHA Form 1 for the contractor must indicate "CHEMNEP" in block 25d and the Optional Information must indicate in Item 42:Type = N; ID = 01; and Value = (the OSHA Form 1 inspection number of the host employer).

3. All consultation activities (Form 20, 30, and Form 66) conducted in response to this NEP must include "CHEMNEP" in the National

Emphasis code field on the forms.

XI. Appendix A: CSHO Instructions for the Dynamic Lists.

This appendix is provided as guidance for the NEP inspections.

Appendix A

CSHO Instructions for the Dynamic Lists

Background and Description. CSHOs must use the appropriate Dynamic List as described in Section D.3 of this notice. The Dynamic Lists are found on the DEP intranet website, 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 of PSM compliance by CSHOs. CSHOs shall mark

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

A determination of "No" for any question may indicate noncompliance. Therefore, any "No" shall normally result in a citation for a violation of the indicted provisions provided that the other *prima facie* elements (a hazard exists, an OSHA standard applies, employer knowledge of the hazard, and employee 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 violations may be more appropriate. CSHOs shall 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 shall 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 interrelationship of 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 abatement 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, 1910.119(j)(2), and

- specific employer action/task abatement requirements - e.g., the employer must inspect the piping , 1910.119(j)(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 CPL 02-00-148, *FOM, Chapter 4 Section X.*

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.