



OSHA INSTRUCTION

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

DIRECTIVE NUMBER: CPL 03-00-014

EFFECTIVE DATE: November 29, 2011

SUBJECT: PSM Covered Chemical Facilities National Emphasis Program

ABSTRACT

- Purpose:** This instruction describes policies and procedures for a National Emphasis Program (NEP) to reduce or eliminate the workplace hazards associated with the catastrophic release of highly hazardous chemicals.
- Scope:** This Instruction applies OSHA-wide. Both Programmed and Unprogrammed inspections will take place in all OSHA Regions.
- References:** See Paragraph III.
- Cancellations:** 10-05 (CPL 02), *PSM-Covered Chemical Facilities National Emphasis Program*.
- State Impact:** Notice of Intent and Adoption required. See paragraph VIII.
- Action Offices:** National, Regional, Area, and State Plan Offices
- Originating Office:** Directorate of Enforcement Programs (DEP).
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By and Under the Authority of

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ABSTRACT-1

Executive Summary

This instruction provides guidance to Occupational Safety and Health Administration (OSHA) national, regional, and area offices for implementing and conducting an NEP to reduce or eliminate workplace hazards associated with the catastrophic release of highly hazardous chemicals. Both programmed and unprogrammed inspections associated with this NEP will begin immediately in all Regions.

Table of Contents

- I. Purpose..... 2
- II. Scope..... 2
- III. References..... 2
- IV. Cancellations..... 3
- V. Significant Changes..... 3
- VI. Action Offices..... 3
- VII. Application..... 4
- VIII. Federal Program Change..... 4
- IX. Background..... 4
- X. Acronyms..... 5
- XI. Program Procedures..... 6
 - A. Programmed Inspection Site Selection..... 6
 - 1. Targeting Sources..... 6
 - 2. Facility Identification and Master List Generation..... 6
 - 3. Inspection Scheduling..... 8
 - B. SST and Unprogrammed Inspections (Applies to all OSHA Regions)..... 8
 - 1. SST Inspections..... 8
 - 2. Unprogrammed Inspections..... 8
 - C. Inspection Resources..... 9
 - 1. Inspection Team Personnel..... 10
 - 3. Utilization of Other OSHA Technical and Enforcement Resources..... 13
 - 4. Utilization of OSHA Health Response Team (HRT)..... 13
 - 5. Industry Reference Material Availability..... 13
 - D. Inspection Process..... 14
 - 1. NEP Inspection Process Different from PSM CPL PQV Process..... 14
 - 2. Emphasis on Implementation over Documentation..... 14
 - 3. Dynamic List Questions..... 14
 - 4. Expanding the Inspection..... 15
 - 5. Inspect Both Host and Contract Employers..... 15
 - 6. Review Inspection History and Abatement..... 15
 - E. Inspection Procedures..... 15
 - 1. Supplemented FOM Procedures..... 15
 - 2. Opening Conference..... 15
 - 3. Documentation to be Requested -- General and Process-Related..... 18
 - 4. PSM Overview..... 19
 - 5. Personal Protective Equipment (PPE) and Camera/Video Use..... 19
 - 6. Initial Walkaround..... 20
 - 7. Selection of Unit..... 21
 - 8. Inspection of Contractors..... 22
 - 9. Compliance Guidelines..... 22
 - 10. Review Inspection History and Abatement..... 23
 - 11. Citations..... 23
 - F. Program Evaluation..... 23
 - G. Outreach..... 24
 - H. IMIS and OIS Coding Instructions..... 24
- Appendix A A-1

I. Purpose.

This instruction 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 29 CFR 1910.119. Programmed inspections¹ will be conducted in facilities that are known to OSHA as having a risk of catastrophic releases. Unprogrammed inspections² will take place in PSM-covered facilities as described in this Instruction. This NEP does not apply to Petroleum refineries (NAICS 32411).

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, Personal Protective Equipment](#)
- G. [29 CFR 1910.307, Hazardous \(Classified\) Locations](#)
- H. [OSHA Instruction CPL 02-00-148, Field Operations Manual \(FOM\)](#), November 9, 2009.
- I. [OSHA Instruction ADM 03-01-005, OSHA Compliance Records, August 3, 1998.](#)

1 Programmed inspections are defined in *CPL 02-00-148 Field Operations Manual* as “inspections of worksites which have been scheduled based upon objective or neutral selection criteria.”

2 Unprogrammed inspections are defined in *CPL 02-00-148 Field Operations Manual* as “inspections scheduled in response to alleged hazardous working conditions that have been identified at a specific worksite.”

- 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. [OSHA Notice 10-06 \[\(CPL 02\)\] Site-Specific Targeting 2010](#), August 18, 2010.
 - 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 web page,
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
 - Q. [OSHA Instruction CPL 03-00-010, Petroleum Refinery Process Safety Management National Emphasis Program](#), August 18, 2009.
- IV. Cancellations.
- This Instruction cancels OSHA 10-05 (CPL 02) PSM-Covered Chemical Facilities National Emphasis Program.
- V. Significant Changes.
- This Instruction expands the PSM-Covered Chemical Plants National Emphasis Program nationwide to all OSHA Regions and State Plans. Facility categories have been reduced from three in the pilot NEP to two: facilities likely to have ammonia used for refrigeration as the only Highly Hazardous Chemical (HHC) and all other facilities. The number of programmed inspections required per Area Office has been reduced. Significant industry and/or OSHA experience has been recognized for CSHO qualifications to conduct PSM inspections. A requirement to verify abatement of previous OSHA PSM citations has been added. Instructions for preparing targeting lists have been clarified, and program evaluation requirements have been reduced.
- VI. Action Offices.
- National, Regional, Area, and State Plan Offices.

VII. 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.

VIII. Federal Program Change. Notice of Intent and Adoption Required.

This instruction describes an NEP for inspecting facilities with PSM-covered processes. Because the seriousness and prevalence of the hazards addressed are nationwide, States are required to participate in this emphasis program. All such inspections and related compliance assistance activity should be coded CHEMNEP as directed in paragraph XI.H.

States are required to notify OSHA within 60 days whether the State's emphasis program will be identical to or different from the Federal program. If a State is already implementing an emphasis program in this area, or if it adopts a new initiative in response to this Federal program change, its implementing policies and procedures are expected to be at least as effective as those in this instruction.

If a State adopts or maintains an emphasis program on PSM-covered Chemical Facilities which differs from the Federal program, the State must identify the difference and may either post its different procedures on its State Plan's website and provide the link to OSHA, or provide an electronic copy to OSHA with information on how the public may obtain a copy. If the State's emphasis program is identical to the Federal program, it must provide the date of adoption to OSHA. State adoption must be accomplished within six months, with posting or submission of documentation within 60 days thereafter. OSHA will provide summary information on the State to this instruction on its website.

OSHA's Office of Statistical Analysis will work with the States to provide the data necessary to develop their own targeting lists according to the instruction in section XI.A. OSHA will make the dynamic list of questions available to the States. States must code any inspections (programmed or unprogrammed) and related compliance assistance activity conducted under this NEP as directed in Section XI.G. States using the procedures in this instruction are asked to provide the feedback set out in section XI.F to the Directorate of Enforcement Programs through their Regional Offices in order to assist OSHA in evaluating this program.

IX. 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 releases of 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 Verification (PQV) 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.

X. 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. DEA Directorate of Evaluation and Analysis (OSHA National Office)
- G. EPA - U.S. Environmental Protection Agency
- H. FOM – Field Operations Manual
- I. HAZWOPER – Hazardous Waste Operations and Emergency Response
- J. HHC – Highly Hazardous Chemical
- K. LEL – Lower Explosive Limit

- L. NAICS – North American Industrial Classification System
 - M. NEP – National Emphasis Program
 - N. NO – National Office (OSHA)
 - O. RA – Regional Administrator (OSHA)
 - P. RAGAGEP – Recognized and Generally Accepted Good Engineering Practices
 - Q. RMP – Risk Management Plans (U.S. EPA)
 - R. RO – Regional Office (OSHA)
- XI. Program Procedures.
- A. Programmed Inspection Site Selection.
 - 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. OSHA’s National Office will use the following procedure to create two National Chemical Targeting Lists:
 - DEP will obtain a list of facilities that submitted EPA Program 3 RMP;
 - DEA will provide DEP with a list of facilities identified in the IMIS or OIS databases as having being previously cited under PSM, sorted by NAICS Code;

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.

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- DEA will provide DEP with a list of facilities with NAICS codes identified as explosives manufacturing;
- DEP will combine these lists and sort them into two lists:
Category 1 – NAICS Codes for facilities likely to have ammonia used for refrigeration as the only HHC; Category 2 – NAICS Codes for facilities likely to have ammonia used for other than refrigeration, or HHCs other than ammonia.

These lists will be divided by OSHA Region and posted on the OSHA DEP Intranet website. The national list will be updated annually.

- b. The Office of Statistics shall create a list of all known establishments with NAICS codes identical to those identified in the IMIS database as having received prior PSM citations sorted by Area Office jurisdiction. This list, the Potentially PSM-Covered Facilities List, will be posted on the DEP Intranet website. These facilities will not be automatically added to the targeting list, but used by the OSHA Regions to consider when adding facilities based on local knowledge.
- c. Each OSHA Region shall prepare local Category 1 and 2 master lists of facilities. Based on their familiarity with local facilities, OSHA Regions shall:
 - Add any facility that is not on the national list, are known by the Region to operate in their jurisdiction, and are known as likely to be PSM-covered.

OSHA Regions should note that because EPA's RMP and OSHA's PSM cover different chemicals, the national list may be missing PSM covered facilities – particularly those that use flammable liquids. Therefore, OSHA Regions should consult the Potentially PSM-Covered Facilities List and add any listed facility that, based on local knowledge is likely to be PSM-covered.

- Delete any facility that is 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);
- Delete 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); and

- Delete any facility that has received a comprehensive PSM inspection within the last two years.

The OSHA Regions must update their master lists annually and maintain the 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*.)

Note: OSHA Regions may choose to have the lists created and maintained by the AO at their discretion.

3. Inspection Scheduling.

- a. Programmed inspections will take place immediately in all regions.
- b. Regions should each complete an average of 3-5 programmed inspections per AO per year using this NEP. In situations where an AO has fewer than three PSM-covered facilities in its jurisdiction, the Region should schedule more Chem NEP inspections in area offices with a greater number of PSM-covered facilities. Each Region shall randomly select inspection sites from its master lists.
- c. In order to ensure that inspections are appropriately allocated across all hazardous processes, inspections should consist of approximately 75% from the Category 2 Master List and approximately 25% from the Category 1 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 selected 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 either outside of the selected unit or beyond the scope of the 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 fall protection hazards 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 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* – the inspection will include the accident investigation item(s)/subjects and a Chemical NEP inspection using 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.

Notes on training:

- OTI Course 3430 covers 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.
- 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.

1. Inspection Team Personnel.

a. Inspections of Ammonia Refrigeration Processes Only - 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*.
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.

- b. Level 1. OSHA 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 3430, *Advanced PSM in the Chemical Industries* or Course 3410, *Advanced Process Safety Management*.
and,
 - They have prior experience (OSHA, other government agency, or industry) with chemical industry safety including: accident investigations in chemical, petrochemical or refinery plants involving fires, explosions, and/or toxic chemical releases,
or,
 - They have previous (OSHA, 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,

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- They have 7 years Federal or State OSHA experience.
and,
 - They have participated in greater than 20 PSM and/or chemical plant inspections where they were the team leader equivalent in at least two of these inspections.
- c. Level 2. OSHA personnel may be assigned as inspection team members under this notice, if:
- 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 two years of OSHA inspection experience or the equivalent, such as State OSHA experience, EPA RMP experience, U.S. Chemical Safety Board experience.
 - Option 2:
 - 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
 - 7 years of Federal or State OSHA 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.

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 compliance with programmatic sections of the PSM standard.
 - Level 3 team members may evaluate compliance with the following elements of the PSM standard:
 - (c) employee participation
 - (g) training
 - (h) contractors
 - (k) hot work permits
 - (m) incident investigation
 - (n) emergency planning and response
2. ROs will determine, document, and provide to DEP-Office of General Industry the PSM qualification level for each CSHO conducting PSM inspections based on the options listed above. DEP-Office of General Industry will keep this information in a central file. ROs will update this documentation annually for each CSHO whose PSM qualification level has changed in the previous year.
 3. 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.
 4. Utilization of OSHA Health Response Team (HRT).

AOs may include technical experts from the HRT OSHA Salt Lake City Technical Center (SLTC) as circumstances warrant.
 5. Industry Reference Material Availability.

OSHA's PSM Safety and Health Topics web page 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 accessible 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. CSHOs may also access documents available online through OSHA's Technical Data Center.

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 workers, and verifying full implementation.

2. Emphasis on Implementation over Documentation.

Based on 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 and use a dynamic list(s) of questions (referred to in this document as the dynamic list) to review PSM compliance.

- a. DEP continuously develops dynamic lists in three categories: PSM General, Ammonia Refrigeration, and Chemical Processing. DEP will periodically issue new 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) 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, 2010. The previous

dynamic list has an “Effective Date” of August 1, 2010. The inspection opening date is August 15, 2010. 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: Please contact DEP if you have difficulty downloading the dynamic list.

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

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, if any.

6. Review Inspection History and Abatement.

CSHOs shall review the employer’s history of OSHA inspections and any abatement verification submitted for citations resulting from those inspections.

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 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 AO, 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. 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.

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.

- 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
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 shall 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 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 standard or 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. OSHA 300 logs for the previous three years for the employer and the process related contractors*.
- b. All contract employee injury and illness logs as required by 1910.119(h)(2)(vi)*.
- c. A list of all PSM-covered process/units in the complex.
- d. 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.

- e. A summary description of the facility's PSM program.
- f. Unit process flow diagrams*.
- g. Piping and instrumentation diagrams (P&IDs) including legends*##.
- h. Unit Plot plans*.
- i. Unit Electrical classification diagrams*##.

- j. Process narrative descriptions*.
- k. Descriptions of safety systems (e.g., interlocks, detection or suppression systems)*##.
- l. Design codes and standards employed for process*## and equipment*## in the Selected Unit (s).
- m. 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)##.
- n. 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).

- o. Safe upper and lower operating limits for the Selected Unit(s)*##.
- p. 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 shall 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 standard's 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.

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 shall 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 accord 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 non-intrinsically safe 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 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 workers 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 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 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 investigation 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 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 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. 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 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 OSHA standards or the General Duty Clause 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 shall 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 shall determine whether there has been a failure to abate in accordance with CPL 02-00-148 – *FOM*, and issue a notice 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 shall be issued in accord 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 workers.
- 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. After one year, the NEP will be evaluated to determine the effectiveness of this Instruction. After three years, the NEP will be evaluated to determine its effectiveness in enforcing OSHA standards.

The AO will submit the information listed below through OSHAPedia on its respective Region's Chemical NEP Inspection Information Page. The Region should report this information at least every six months.

Information to be provided in the AO reports includes:

1. A list of the facilities inspected including:
 - a. The facility category as defined in XI.A.2.a;
 - b. The facility NAICS code, process type, and covered chemical and quantity, or reason for exemption from PSM coverage;
2. A list of all inspections (including employer name, address, and NAICS code) that were closed because there was no PSM-covered process.
3. A list of any dynamic list questions that were difficult for CSHOs to use or inappropriate, and an explanation of why this was the case.

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 is encouraged to develop outreach programs that will support its 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, worker 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.

H. IMIS and OIS 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. For IMIS, 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 (Forms 20, 30, and Form 66) conducted in response to this NEP must include "CHEMNEP" in the National Emphasis code field on the forms.

Appendix A

CSHO Instructions for the Dynamic Lists

Background and Description. CSHOs must use the appropriate Dynamic List as described in Section XI.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, start-up, 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 if the employer does not have an acceptable alternative in place. Therefore, any "No" shall normally result in a citation for a violation of the indicated provisions provided that the other *prima facie* elements (a hazard exists, an OSHA 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 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.

