

# **FAQ SHEET**

## **- PETROLEUM REFINERY PSM NATIONAL EMPHASIS PROGRAM (NEP) (OSHA CPL 03-00-004, JUNE 7, 2007)**

### ***Acronyms and Abbreviations Used***

CSHO	-	Compliance Safety and Health Officer
DEP	-	Directorate of Enforcement Programs
DML	-	Dynamic Master List
DPL	-	Dynamic Primary List
DSL	-	Dynamic Secondary List
HHC	-	Highly Hazardous Chemical
IPI	-	Inspection Priority Item
NAICS	-	North American Industrial Classification System
NEP	-	National Emphasis Program
OSHA	-	Occupational Safety and Health Administration
PQV	-	Program, Quality, Verification
PSM	-	Process Safety Management
RAGAGEP	-	Recognized and Generally Accepted Good Engineering Practices
SHARP	-	Safety and Health Achievement Recognition Program
SIC	-	Standard Industrial Classification
VPP	-	Voluntary Protection Program

### ***What is the refinery NEP?***

A special inspection program targeted at petroleum refineries with the intention of further reducing or eliminating workplace hazards associated with the catastrophic release of highly hazardous chemicals (HHCs).

### ***Why is this program being implemented?***

OSHA believes there has been a large number of fatal or catastrophic incidents in the petroleum refining industry warranting a national emphasis program. No other industry sector has had as many such incidents related to the release of HHCs since the promulgation of the PSM standard in 1992. The number of such incidents for refineries surpasses the combined total of the next three highest industries over the same period (SIC 2899 Chemical Manufacturing, SIC 2869 Industrial Organic Chemical Manufacturing, and SIC 2892 Explosive Manufacturing).

The explosion and fire at the BP America Refinery in Texas City, TX on March 23, 2005 that killed 15 employees and injured another 170 was a major driver. Indeed, the details of that accident have had a major influence on the content of the NEP.

### ***Is this a unique program?***

Not really. OSHA has NEPs for other areas such as shipbreaking, nursing homes, and lead. However, it is the first NEP to address PSM.

### ***What is in CPL 03-00-004?***

The Instruction describes policies and procedures for OSHA to verify employers' compliance with OSHA's standard, *Process Safety Management of Highly Hazardous Chemicals*, 29 CFR 1910.119. It covers the selection of refineries for inspection by OSHA, selection of processes to inspect, inspection team qualifications, reference materials to be used, and procedures to follow. The Instruction is intended for use by OSHA national, regional, and area offices, and state programs which choose to implement a similar program.

### ***Who is covered?***

Petroleum refineries included in Standard Industrial Classification (SIC) 2911 [North American Industrial Classification System (NAICS) 324110]. However, other process industry facilities should take note of the program and ensure their PSM programs meet OSHA's expectations. OSHA does not intend for the refinery industry to be held to a higher standard than other industries.

### ***Are any refineries exempted?***

Yes, any refinery establishment which is an approved participant in OSHA's Voluntary Protection Programs (VPP), or in OSHA Consultation's Safety and Health Achievement Recognition Program (SHARP).

### ***When will the inspections be made?***

Inspections will be scheduled over a two-year period. Regions are to schedule 40 percent of the inspections in the first year and 60 percent in the second year. Regions have the option and are encouraged to complete the scheduled inspections before the second year ends.

### ***What will be inspected?***

The inspection team leader will select one or more PSM-covered processes at the refinery to evaluate compliance with the PSM standard based on various factors identified in the NEP. The covered process(es) are termed the *selected unit(s)*. Typically, they will be operating units and not storage areas. If blowdowns exist in the facility but are not present in the selected unit(s), one or more blowdowns which are part

of other PSM-covered processes must be randomly selected and evaluated.

If during the compliance evaluation it is determined that a number of deficiencies exist in the employer's PSM compliance, the inspection may be expanded to other selected unit(s).

Both host employer and contractor / subcontractor (including construction) employees working on or near the selected units(s) must be included in the inspection. If there are no contractors working on or near the selected units(s), another PSM-covered process where contractors are known to be working must be chosen and the contractors evaluated.

The NEP identifies an extensive list of documents to request from refineries. Initially, only access is to be requested. Lists of documents are to be requested and used to select representative documentation for examination. The number and type of documents to request and the number of employees to interview is at the discretion of the OSHA inspection team.

### ***What does OSHA mean by a blowdown?***

*Blowdown* refers to a piece of disposal equipment in a pressure-relieving system whose construction consists of a drum to collect liquids that are separated from vapors, and a vent stack, which is an elevated vertical termination discharging vapors into the atmosphere without combustion or conversion of the relieved fluid. They are separate vessels intended to receive episodic or emergency discharges and they are designed to collect liquids and to dispose of vapors safely. Note: this was the critical piece of equipment involved in the March 23, 2005 BP Texas City incident.

### ***How will inspections be made?***

An OSHA team will perform the inspection. The NEP inspection process is different from use of the Program, Quality, Verification (PQV) checklist in the Compliance Directive (CPL 2-2.45A - now CPL 02-02-045). The PQV approach employs a broad, open-ended inspection strategy and uses a more global approach to identify compliance deficiencies. NEP provides a tool that identifies a particular set of requirements from the PSM standard which are viewed by OSHA as priority items. The emphasis is on checking *implementation* of PSM programs. Compliance Safety and Health Officers (CSHOs) are to review documents, interview employees and verify implementation for specific processes, equipment and procedures. This approach is expected to take less time and result in more inspections with potentially fewer violations.

The NEP inspection process involves two steps:

#### Step 1. Static-List-Based Evaluation

A compliance review is conducted based on a static list of inspection priority items (IPI) in the selected PSM-covered process. Questions from mandatory Appendix A of the Instruction are used to evaluate compliance relating to aspects of refinery process safety including equipment, engineering and administrative controls, safe work practices, and Recognized and Generally Accepted Good Engineering Practices (RAGAGEP). Compliance is determined based on the answers to the questions.

#### Step 2. Dynamic-List-Based Evaluation

OSHA's Directorate of Enforcement Programs (OSHA National Office) (DEP) will develop a Dynamic Master List (DML) of IPIs. Periodically (e.g. every 2 - 4 weeks), DEP will select a number of IPIs from the DML and assign them to a Dynamic Primary List (DPL) and a Dynamic Secondary List (DSL). These lists will be used by CSHOs for PSM evaluations of the selected PSM-covered process. CSHOs must evaluate compliance with each item on the DPL. If one or more items on the DPL is found not to be applicable to the PSM-covered process, IPIs from the DSL will be used to replace those from the DPL that were inapplicable. Replacement IPIs from the DSL will be chosen in numerical order. (OSHA provides an example that mentions 15 items on the DPL. This may provide an indication of the expected size of the DPL.)

The DML, DPL and DSL will not be publicly disclosed. The DPL and DSL will be provided to CSHOs on OSHA's intranet and they must use ones that are effective at the time of the opening conference with a refinery.

These list-based evaluations are gap analyses formatted in a series of questions to facilitate the evaluation of various IPIs related to PSM. Each question has three possible answers: Yes, No, and Non-Applicable (N/A). If questions on the DPL are not applicable to the selected unit(s), they will be replaced with items from the DSL.

Both steps are mandatory.

#### ***What is covered in Appendix A?***

A total of 98 questions are presented on 18 topics relating to design, fabrication, installation, startup, operation, maintenance, change, controls (engineering and administrative), safe work practices, contractor safety, etc. While most PSM elements are addressed explicitly, additional key topics are included. Each question includes possible violations if answered in the negative and, in some cases, compliance guidance is provided to assist CSHOs in answering the questions.

Here is a summary of the questions:

TOPIC	# OF QUESTIONS
A. Management of Change	2
B. Relief Systems	15
C. Blowdown Drums and Vent Stacks (Blowdowns)	11
D. Vessels	13
E. Piping	11
F. Operating Procedures - Normal. Emergency Shutdown and Emergency Operations	8
G. PHA, Incident Investigation and Compliance Audits Findings / Recommendations	3
H. Facility Siting	1
I. Human Factors	5
J. Employee Participation	3
K. Operator Training	3
L. P&ID Verification	1
M. Contractor Safety	4
N. Safe Work Practices	5
O Pre-Startup Safety Reviews	2
P. Hot Work Permits	3
Q. Incident Investigation Reports	3
R. Emergency Planning and Response	5
Total	98

***Will facilities be cited for non-compliance?***

Yes. Usually, the employer shall be cited for each “No” response to each question in the IPI lists. The specific violation will normally relate directly to the IPI question but

alternate standards may be cited.

If hazardous conditions or violations of OSHA standards are discovered that are not specifically addressed in this Instruction then these conditions or violations may also be cited. Citations for violations of the PSM standard shall be issued in accordance with CPL 02-00-103, and owing to their nature, they shall not normally be classified as "other-than-serious."

### ***What else should I know about the Instruction?***

It contains an extensive listing of 47 regulations and industry codes, standards and guidelines. The implication is that facilities should be aware of and have implemented applicable requirements and guidance.

Each OSHA regional office must have industry reference documents available for CSHOs to use as resources to support enforcement activities during the inspection including, at a minimum:

*API 510 – Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair and Alteration*

*API 570 - Piping Inspection Code*

*Guidelines for Mechanical Integrity Systems, AIChE / CCPS*

*Guidelines for Engineering Design for Process Safety, AIChE / CCPS*

This suggests areas of emphasis in the inspections.

OSHA provides for the first time definitions of some key terms used in the PSM standard including facility siting, human error, human factors, and Recognized and Generally Accepted Good Engineering Practice (RAGAGEP).

### ***Where can I get a copy of the OSHA Instruction?***

From OSHA at [www.osha.gov](http://www.osha.gov) or from Primatech at [www.primatech.com](http://www.primatech.com).

### ***What should I do?***

Get the jump on OSHA! Arrange an independent review and institute any needed remedial measures before you are visited by OSHA.

***How can I get further information?***

Contact Primatech at:

50 Northwoods Blvd.  
Columbus, OH 43235  
Tel 614-841-9800  
Fax 614-841-9805  
[www.primatech.com](http://www.primatech.com)

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- ***Threat and Vulnerability Analysis for Deliberate Acts Including Terrorism***
- ***S84 – Safety Instrumented Systems***
- ***Layers of Protection Analysis (LOPA)***
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