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New Mexico Occupational Health and Safety Bureau (OHSB) Directive 12-06

Subject: Local Emphasis Program (LEP) for Health and Safety Hazards in the Petroleum Refining Industry (NAICS 32411).

A. Purpose: This notice establishes an LEP for inspecting petroleum refineries (refineries) included in NAICS 32411 and contains policies and procedures to assure employer's compliance with OSHA's Process Safety Management of Highly Hazardous Chemicals Standard, 29 CFR 1910.119.

B. Scope: This notice applies to the State of New Mexico OHSB.

C. References: The following section refers to documents and websites which are included in this directive. For additional references to documents used for process safety in the refining and chemical industries, see OSHA's PSM Safety and Health Topics website. This website provides references for equipment design and in-service practices (*e.g.*, inspection, testing, preventative and predictive maintenance, repair, alteration, rerating and fitness-for-service evaluations) and other important aspects of process safety including process hazard analysis, human factors, facility siting, fire protection, mechanical integrity, procedures, management-of-change, etc.

1. New Mexico Field Operations Manual
2. 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, Explosives and Blasting Agents* standard; 29 CFR 1910.119.
3. OSHA Instruction CPL 03-00-004 – Petroleum Refinery Process Safety Management National Emphasis Program
4. 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
5. 29 CFR 1910.106, *Flammable and Combustible Liquids*
6. 29 CFR 1910.146, *Permit-Required Confined Spaces*
7. 29 CFR 1910.147, *The Control of Hazardous Energy (Lockout/Tagout)*
8. 29 CFR 1910, Subpart I, *Personal Protective Equipment*
9. 29 CFR 1910.307, *Hazardous (Classified) Locations*

10. CPL 02-00-025 - CPL 2.25I - *Scheduling System for Programmed Inspections*, January 4, 1995
11. *Petroleum Refining Processes*, OSHA Technical Manual, Section IV: Chapter 2
12. OSHA Instruction CPL 02-01-037 (CPL 2-1.037), *Compliance Policy for Emergency Action Plans and Fire Prevention Plans*, July 9, 2002
13. OSHA PSM Safety and Health Topics website
14. OSHA Refinery Location List DEP Intranet website
15. *Accidental Release Prevention Requirements - Risk Management Programs Under the Clean Air Act*, U.S. Environmental Protection Agency's (EPA) standard, 40 CFR 68
16. *API 510 – Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair and Alteration*; 8th ed., Addendum 1 - 12/98, Addendum 2 - 12/2000, Addendum 3 - 12/2001; and Addendum 4 – 8/2003; American Petroleum Institute (API)
17. *API 570 - Piping Inspection Code*, American Petroleum Institute, 2nd ed., 10/98, Addendum 1 - 2/2000, Addendum 2 - 12/01, Addendum 3 - 8/2003; API
18. *API Recommended Practice (RP) 572 – Inspection of Pressure Vessels*, 2nd Ed., 2001, API
19. *API RP 574 – Inspection Practices for Piping System Components*, 2nd Ed., 1998, API
20. *API/(ANSI) Standard (STD) 521 – Pressure-Relieving and Depressuring Systems, 5th Ed., 2007, API*
21. *API RP 576 - Inspection of Pressure Relieving Devices*, 2nd Ed., 2000, API
22. *API RP 578, Material Verification Program for New and Existing Alloy Piping Systems*, 1st Ed., 1998, API
23. *API RP 752, Management of Hazards Associated with Location of Process Plant Buildings*, 2nd Ed., 2003, API
24. *API RP 579, Fitness-for-Service*, 2000, API
25. *API Publication 770, A Manager's Guide to Reducing Human Errors, Improving Human Performance in the Process Industries*, 2001, API
26. *ASME Boiler and Pressure Vessel Code*, ASME
27. *ASME B31.3 – Process Piping*; ASME
28. *Guidelines for Writing Effective Operating and Maintenance Procedures*, CCPS
29. *Guidelines for Mechanical Integrity Systems*, CCPS
30. *Guidelines for Engineering Design for Process Safety*, CCPS
31. *Guidelines for Process Safety Documentation*, CCPS
32. *Guidelines for Auditing Process Safety Management Systems*, CCPS
33. *Guidelines for Facility Siting and Layout*, CCPS
34. *Guidelines for Evaluating Process Plant Buildings for External Fires and Explosions*, CCPS
35. *Safe Design and Operation of Process Vents and Emission Control*, CCPS
36. *Plant Guidelines for Technical Management of Chemical Process Safety*, CCPS
37. *Guidelines for Investigating Chemical Process Incidents*, 2nd Ed., CCPS
38. NFPA 25 - *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, NFPA
39. *Dow's Fire & Explosion Index Hazard Classification Guide*, 7th Ed., AIChE
40. *Chemical Engineer's Condensed Encyclopedia of Process Equipment, 2nd Ed., 2004, N.P. Chermisionoff*

41. *Atmospheric Relief*, PowerPoint presentation, Bill Banick, ExxonMobil, October 24-25, 2006, 9th Annual Symposium, Mary Kay O'Connor Process Safety Center, Texas A&M University, College Station, Texas
42. *Safety Bulletin – Positive Material Verification: Prevent Errors During Alloy Steel Systems Maintenance, BP Texas City, TX Refinery Fire*, October, 2006, U.S. Chemical Safety and Hazard Information Board (CSB)
43. *Accident Investigations – A New Approach*, 1983, National Safety Council

D. Cancellation: This notice does not cancel any notice.

E. Expiration: This notice expires on September 30, 2013.

F. Action: OHSB Compliance personnel will ensure that the procedures contained in this notice are followed.

G. Background: OHSB is initiating this LEP to address catastrophic releases of highly hazardous chemicals (HHC) at refineries. The large number of fatal or catastrophic incidents in the petroleum refining industry indicates the need for a local emphasis program.

Since the PSM standard was promulgated by OSHA in 1992, no other industry sector has had as many fatal or catastrophic incidents related to the release of HHC as the petroleum refining industry (SIC 2911 (NAICS 32411)). According to OSHA's IMIS database, since May 1992, 36 fatality/catastrophe (FAT/CAT) incidents related to HHC releases in the refining industry have occurred. These incidents included 52 employee deaths and 250 employee injuries, including 98 injuries that required hospitalization. The number of refinery FAT/CAT incidents surpasses the combined total of the next three highest industries over the same period (SIC 2899 Chemical Manufacturing, Not Elsewhere Classified (NEC) – 12 FAT/CATs; SIC 2869 Industrial Organic Chemical Manufacturing, NEC – 12 FAT/CATs; and SIC 2892 Explosive Manufacturing – 11 FAT/CATs).

Recent FAT/CAT incidents involving HHC releases at refineries include the massive explosion and fire at the BP America Refinery in Texas City, Texas, on March 23, 2005. During an isomerization unit startup at the refinery, a splitter tower was grossly overfilled with liquid hydrocarbons until the overpressure protection system released the hydrocarbons to a Blowdown drum and stack (Blowdown system). The relieving hydrocarbons then quickly over-filled the Blowdown system and caused the Blowdown stack to expel heavier-than-air hydrocarbon liquids and vapors into the atmosphere, resulting in the formation of an unconfined vapor cloud in and around the isomerization unit. The vapor cloud then ignited. The ensuing explosions and fires killed 15 employees and injured another 170. Placing non-essential employees in trailers too close to the isomerization unit substantially increased the incident's severity.

On January 19, 2005, another refinery incident killed one employee and caused multiple injuries to other employees at the Kern Oil Refinery in Bakersfield, California. At the time of the incident, employees were starting-up the refinery's crude unit and were isolating and cleaning a series of three prefractionator reboiler pumps. While using a pressurized steam line to clean the body of one of the pumps, workers over pressurized the pump casing which then catastrophically ruptured, releasing and igniting hot oil that immediately

exploded.

At the Giant Industries Ciniza Refinery near Gallup, New Mexico, on April 8, 2004, six employees were injured, with 4 of these employees being hospitalized with serious burn injuries when gasoline components were released and ignited. Maintenance workers were removing a malfunctioning pump from the refinery's hydrofluoric acid (HF) alkylation unit when the release occurred. A shut-off valve connecting the pump to a distillation column was to be closed during the maintenance activity. This valve, however, was apparently left in an open position, leading to the release of flammable liquids and vapors which caused subsequent explosions.

H. Definitions:

The following section contains definitions used in this directive.

1. **Acceptable limits** mean the technical basis as defined and used to determine whether equipment is deficient. [Adapted from Ref. 33]

2. **Blowdown(s)** refers to a piece of disposal equipment in a pressure-relieving system whose construction consists of a drum to collect liquids that are separated ("knockout") 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. Blowdown(s) are separate vessels intended to receive episodic (e.g., when de-inventorying a vessel for a planned shutdown) or emergency discharges. Blowdown(s) are designed to collect liquids and to dispose of vapors safely. In the refinery industry, hydrocarbons typically enter Blowdown(s) as liquids, vapors, or vapors entrained with liquids. Blowdown(s) typically include quench fluid systems which reduce the temperature of hot, condensable hydrocarbons entering the Blowdown as well as the amount of vapor released via the vent stack. These systems can include internal baffles to help disengage liquids from hydrocarbon vapors. Sometimes, Blowdown(s) include inert gas or steam systems to control flashback hazards and to snuff vent stack fires if ignited by sources such as lightning. (See, e.g., API RP 521, CCPS [Ref. 40], Chermisionoff [Ref. 44], Bannick, ExxonMobil [Ref. 45].)

3. **Deficient (or deficiency)** (as per 1910.119(j)(5)) means a condition(s) in equipment/system outside of acceptable PSI limits.

   Compliance guidance: Examples of equipment/system deficiencies include condition(s) such as:

   1) equipment or systems that are not designed, fabricated, constructed or installed per Recognized and Generally Accepted Good Engineering Practices (RAGAGEP). E.g., deficiencies that do not meet RAGAGEP include the design pressure drop at the inlet of a relief device that exceeds limits specified in RAGAGEP such as the BPVC and API 521);

   2) mechanical defects which interfere with the equipment/system capability to operate/function as intended, (e.g., a video camera monitoring the status of the flame at the flare fails due to some component malfunction, or a level transmitter does not function as intended);

   3) a degradation in the equipment/system exceeding the equipment's acceptable limits (e.g.,, operating a pressure vessel, tank or piping with a wall thickness less than its retirement thickness);

   4) equipment operated outside its normal operating limits (e.g., operating a

pressure vessel above its pressure and temperature limits, exceeding the vibration limits of a pump, operating equipment with an associated alarm being suppressed/disabled on the control board, or the continued use of non-calibrated instrumentation which does not meet functional performance criteria);

5) equipment/system leaks; or

6) equipment by-passed to allow for continued operations, including both process equipment such as vessels, piping and valves, and process controls, such as "jumpered" instrumentation and computer controls.

If an employer's PSI does not list acceptable limits, or if an employer's PSI for equipment/systems does not state when its equipment/systems are deficient, then employers are required to comply with 29 CFR 1910.119(j)(5) by correcting deficiencies in equipment/systems which are outside RAGAGEP limits. Additionally, equipment/systems conditions are outside acceptable limits when their functional capabilities are hampered (e.g., when the equipment/system is not functioning properly due to some mechanical component failure).

Compliance guidance: CCPS [Ref. 33], Table 8-1, Acceptance Criteria Resources, Table 8-2, Examples of Acceptance Criteria for Common Types of Equipment, and Chapter 9 contain lists of RAGAGEP applicable to common types of process equipment. These tables and lists provide information on acceptable limits as per 1910.119(j)(5) and acceptance criteria (as defined by Ref. 32).

4. **Facility Siting** - With respect to existing plants, "siting" does not refer to the site of the plant in relation to the surrounding community. It refers, rather, to the location of various components within the establishment. (From CPL 02-02-045, Appendix B).

Compliance guidance: Examples of "the location of various components within the establishment" with respect to facility siting include, but are not limited to:

1) permanent and temporary employee-occupied buildings, including trailers, that expose employees by virtue of their location, to potential hazards such as fires, explosions, overpressures, exposure to toxic or corrosive materials, or that risk being damaged by other process equipment (e.g., toppling of equipment on to occupied structures), etc.;

2) cooling towers;

3) flares and other vents to the atmosphere such as Blowdown(s) and relief devices;

4) emergency access (e.g., whether trucks or railcars block emergency access to a unit during an emergency);

5) piperacks, (e.g., high volume/pressure flammable/combustible material pumps located under piperacks such that a seal failure might cause a large fire and domino-effect release(s) from the overhead piperack;

6) emergency response facilities;

7) fire pumps;

8) emergency isolation valves; and

9) others. (See CCPS [Ref. 38], Chapters 5 & 6 for other examples of items related to facility siting ("location of various components within the establishment").)

5. **Human error** means any human action (or lack thereof) that exceeds some limit of acceptability (i.e., an out-of-tolerance action) where the limits of human performance are defined by the system. (See, e.g., API Publication 770).

6. **Human factors** mean disciplines concerned with designing machines, operations and work environments so that they match human capabilities, limitations and needs. Among human factors specialists, this general term includes any technical work (engineering, procedure writing, worker training, worker selection, etc.) related to the human factor in the operator-machine systems. (See, e.g., API Publication 770.)

7. **Process Hazard Analysis** (PHA) for this Directive includes the original PHA, all PHA updates/"redos," and PHA revalidations as required by 1910.119(e).

   Compliance guidance: In this directive if an issue is specific only to the original PHA, PHA update(s), or PHA revalidation(s), it is identified as such.

8. **"Recognized And Generally Accepted Good Engineering Practice"** (RAGAGEP) – are engineering, operation, or maintenance activities based on established codes, standards, published technical reports or recommended practices (RP) or a similar document. RAGAGEPs detail generally approved ways to perform specific engineering, inspection or mechanical integrity activities, such as fabricating a vessel, inspecting a storage tank, or servicing a relief valve (See CCPS [Ref. 33]).

9. **Refinery or Refineries** means petroleum refineries in SIC 2911 (NAICS 32411).

10. **Selected Unit(s)** - PSM-covered process(es) that an inspection team leader selects to verify compliance with OSHA requirements -- primarily the PSM standard. Section J.6.g of this directive describes the process of selecting the covered process/unit.

11. **Throughput** means the rate of production/volume of a defined process (e.g., the entire refinery or a unit/process) over a stated period of time. For example, the refinery's throughput is 200,000 barrels per day or the Fluid Catalytic Cracking Unit's throughput is 80,000 barrels per day.

I. Acronyms: The following section contains acronyms used in this directive.

AIChE – American Institute of Chemical Engineers
ANSI – American National Standards Institute

API – American Petroleum Institute
ASME – American Society of Mechanical Engineers
BPVC – ASME Boiler and Pressure Vessel Code, Section VIII, Division 1 (unless a different Section or Division is specified)
CSB - U.S. Chemical Safety and Hazard Information Board
CO – Compliance Officer
DEP – Directorate of Enforcement Programs (OSHA National Office)
EOP – Emergency Operating Procedure
EPA - U.S. Environmental Protection Agency
ESP – Emergency Shutdown Procedure
FOM – Field Operations Manual
HAZWOPER – Hazardous Waste Operation and Emergency Response
IPI – Inspection Priority Items
ISA - The Instrumentation, Systems, and Automation Society
LFL – Lower Flammable Limit
MI – Mechanical Integrity
MOC - Management of Change
NAICS – North American Industrial Classification System
LEP – National Emphasis Program
NO – National Office (OSHA)
NOP – Normal Operating Procedure
OHSB – Occupational Health and Safety Bureau
OSHA – Occupational Safety and Health Administration
PHA - Process Hazard Analysis
PSI – Process Safety Information
PSSR – Pre-Startup Safety Review
RAGAGEP – Recognized and Generally Accepted Good Engineering Practices
RIK – Replacement-In-Kind
RMP – Risk Management Program (U.S. EPA)
RO – Regional Office (OSHA)
SIC – Standard Industrial Classification
TML – thickness measurement locations

J. Procedures: In FY2012 or FY2013, OHSB will conduct one comprehensive random inspection from a list of all employers in NAICS 32411.

1. **Site Selection**. Inspections conducted under this LEP will be conducted at all refineries within the scope of this Directive. These inspections will focus on PSM-covered processes at refineries. OHSB shall develop a master list of establishments to be inspected within New Mexico in accordance with Chapter II of the FOM.

   a. Refinery Identification. OHSB shall prepare a master list of refineries from those listed in the *Refinery Location List* found on OSHA's DEP Intranet website. This list represents the locations of refineries which have self-reported to Environmental Protection Agency (EPA) under their Risk Management Program (RMP) reporting requirements. Refineries that are not included in this list, but are known by OHSB to exist in New Mexico shall be added to the master list.

   b. Master List Generation: Once the refineries have been identified, the master list of establishments will be generated.

c. **Deletions**. Based on their familiarity with New Mexico refineries, OHSB shall delete from the master list:

i. any refineries that are known to be out of business, documenting the basis for such determinations;

ii. any refinery establishment which is an approved participant in the New Mexico Zia Star Voluntary Protection Program (VPP) or in OSHA Consultation's Safety and Health Achievement Recognition Program (SHARP); and

iii. any refinery establishment that has received an inspection under this LEP within the last three years.

2. **Inspection Scheduling – Programmed Inspections.**

a. Inspections conducted under this LEP shall be scheduled in accordance with the following priorities. OHSB shall prepare a master list of refineries within New Mexico. OHSB will randomly select inspection sites from the master list and any new sites added to the list using the criteria noted in Section J.1.a above.

b. OHSB will maintain the master list of refineries for three years after completion of all the inspections conducted under this LEP.

c. Inspections conducted under this LEP will be scheduled over a four-year period. OHSB will schedule one inspection per year but may schedule additional inspections to complete the inspection schedule prior to the end of the four-year period.

3. **Inspection Scheduling – Unprogrammed Inspections.**

In all unprogrammed inspection activities relating to refineries and the PSM standards, determinations whether to conduct such an inspection shall be made according to the following:

a. **Complaint or referral**. If a formal complaint or referral is received relating to a refinery:

i. and involves the PSM standard, the Compliance Manager shall evaluate the complaint or referral item(s) in the usual manner and conduct an LEP inspection if the Compliance Manager also determines: that the facility is in NAICS 32411; has not already been inspected pursuant to this Directive; and necessary resources are available. Otherwise, the LEP inspection at this refinery would be conducted pursuant to the schedule as described in Section J.2 above; or

ii. if the PSM standard is not involved, the inspection or inquiry (as appropriate) will normally be limited to the complaint or referral item(s)/subject(s) only. However, if the Compliance Manager determines that the facility is in NAICS 32411 and has not already been inspected pursuant to this Directive, a concurrent inspection under this LEP may be conducted at the Compliance Manager's discretion. Otherwise, the LEP inspection at this refinery would be conducted pursuant to the schedule as described in Section J.2 above.

b. **Refinery Accidents and Catastrophes**. Responses to refinery accidents and catastrophes shall follow the guidelines contained in the FOM.

With respect to refinery accidents or catastrophes, if an incident:

i. involves the PSM standard, the accident shall be investigated and an LEP inspection conducted if the Compliance Manager determines that the facility is in NAICS 32411, has not already been inspected pursuant to this Directive, and necessary resources are available. Otherwise, the LEP inspection at this refinery would be conducted pursuant to the schedule as described in Section J.2 above; or

ii. if the PSM standard is not involved, the inspection will normally be limited to the accident investigation item(s)/subject(s) alone. However, if the Compliance Manager determines that the facility is in NAICS 32411 and has not already been inspected pursuant this Directive, a concurrent inspection under this LEP may be conducted at the Compliance Manager's discretion. Otherwise, the LEP inspection at this refinery would be conducted pursuant to the schedule as described in Section J.2. above.

4. **Inspection Resources**

Inspections under this LEP will normally be conducted by a team. Each LEP inspection team will include at least one Team Leader and one Level 1 Team Member as described below. [Note: The Team Leader and Level 1 Team Member can be the same individual.] Appropriate levels of staff experience, training and preparation are essential for compliance activities relating to the PSM standard.

a. **Refinery LEP Inspection Team Leaders**. Inspection Team Leaders under this Directive shall include any OHSB representative the Compliance Manager selects.

i. Team leaders must have prior experience with chemical industry safety. This experience should include experience obtained from:

a. accident investigations in chemical, petrochemical or refinery plants involving fires, explosions and/or toxic chemical releases;

b. previous chemical inspections involving process safety management evaluations;

c. previous chemical industry employment; or

d. experience leading OHSB teams on large inspections.

ii. All OHSB personnel who will serve as team leaders must have attended OTI Course 3410, *Advanced Process Safety Management* to receive training specific to leading team inspections under this Directive.

b. **Refinery LEP Inspection Team Members ("Level 1")**. Only trained OHSB personnel with experience in the chemical processing or refining industries shall be assigned to LEP inspections as Level 1 Team Members under this Directive.

i. As a minimum, Level 1 training must include the OSHA Training Institute's (OTI) Course 3300, *Safety and Health in the Chemical Processing Industries*, and Course 3400, *Hazard Analysis in the Chemical Processing Industries*. Additionally, Level 1 Team Members should have additional advanced training such as OTI Course 3410, *Advanced Process Safety Management* or other equivalent specialized seminars in process safety management.

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

ii. Level 1 Team Members must also have prior experience with chemical industry safety. This experience should include experience obtained from:

a. accident investigations in chemical, petrochemical or refinery plants involving fires, explosions and/or toxic chemical releases;

b. previous chemical inspections involving process safety management evaluations; or

c. previous chemical industry employment.

c. **Refinery LEP Inspection Team Members ("Level 2")**. COs may be assigned as inspection team members under this Directive if:

i. they have two years of OHSB inspection experience or the equivalent; and

ii. 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. **COs with Less Training ("Level 3")**. COs who do not have the training and experience described at c.i or c.ii above, may be assigned to an inspection team under this Directive in the following circumstances:

i. Level 3 COs must be under the direction of a Level 1 or Level 2 CO while participating on an inspection team under this Directive.

ii. Level 3 COs 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.
The following elements of 29 CFR 1910.119 may be appropriately evaluated by Level 3 COs:

a. (c) employee participation

b. (g) training

c. (h) contractors

d. (k) hot work permits

e. (m) incident investigation
f. (n) emergency planning and response

e. **Utilization of Other OHSB Technical and Enforcement Resources.** Inspection team members will fully utilize OHSB and OSHA (RO, NO, DEP and DSTM) technical and enforcement support resources when making decisions regarding compliance or noncompliance.

f. **Compliance Manager Assignment of Resources.** To the extent resources allow, the Compliance Manager shall use COs with experience and training in the chemical industry to perform inspections under this Directive.

g. **Industry Reference Material Availability**. To support inspections under this LEP, OHSB must have industry reference documents available for COs to use as resources to support enforcement activities during the inspection.

h. At a minimum, OHSB will obtain the following documents listed in Section III, *References* of this Directive available for COs prior to conducting inspections as part of this Directive:

i. API 510 – Pressure Vessel Inspection Code: Maintenance Inspection, Rating, Repair and Alteration;

ii. API 570/(ANSI) - Piping Inspection Code

iii. Guidelines for Mechanical Integrity Systems, CCPS

iv. Guidelines for Engineering Design for Process Safety, CCPS

Additionally, OHSB should consult with Region VI OSHA PSM Coordinators to identify other industry documents that would assist in inspections under this Directive. See Section III, *References* in this Directive and OSHA's PSM Safety and Health Topics website for a list of other documents which could be used as resources for conducting inspections under this LEP.

i. **OSHA Technical Manual Chapter on Refinery Operations**. The OSHA Technical Manual includes a chapter, *Petroleum Refining Processes*, that includes information on the characteristics of crude oil, hydrocarbon types and chemistry, and major refinery products and by-products. It presents information on technology normally practiced in present operations, and describes the more common refinery processes and relevant safety and health information. A presentation related to the above chapter on petroleum refining processes is found on the OSHA DEP intranet website.

5. **Inspection Process**

This LEP provides COs with a tool to evaluate compliance with the PSM standard. This tool identifies a particular set of requirements from the standard from which COs are to review documents, interview employees, and verify implementation for specific processes, equipment, and procedures.

This LEP is designed to facilitate inspections at all refineries within the scope of this Directive. This LEP addresses a number of priority items which COs are to evaluate for compliance. Based on the employer's compliance with inspection priority items contained in this Directive, the inspection may be expanded to other processes/units at the refinery.

a. **Emphasis on Implementation over Documentation**. Based on past OSHA inspection history at refineries and large chemical plants, OSHA has typically found that these employers have extensive written documentation related to process safety management, but the implementation of the written documentation has been inadequate. Therefore, COs should focus on the implementation of the various PSM elements and ensure that employers do what they have committed to do in their PSM documentation.

b. **Two Step LEP Inspection Process**. The inspection process under this LEP includes a two-step approach:

i. **Step 1 (Static List Based Evaluation)**: COs shall conduct a PSM compliance review based on a static list of inspection priority items (IPI) in the PSM-covered process that was chosen as the Selected Unit(s) to be evaluated (See J.6.g below). COs must use Mandatory Appendix A to evaluate compliance with various PSM elements. Appendix A contains a series of questions related to various aspects of process safety at refineries, such as equipment, engineering and administrative controls, safe work practices and RAGAGEP in covered process. The answers to these questions will be the basis for determining whether the employer is in compliance with various PSM requirements.

ii. **Step 2 (Dynamic List Based Evaluation)**: COs shall conduct a PSM compliance review based on a dynamic list of inspection priority items (IPI) in the PSM-covered process that was chosen as the Selected Unit(s) to be evaluated (See J.6.g below). This step of

the LEP is mandatory. The following are based on information contained in OSHA Instruction CPL 03-00-004:

a. OSHA's DEP will develop a Dynamic Master IPI List. This master list will be used to select the IPI that COs will use for their PSM evaluations.

b. On a periodic basis (e.g., every 2 to 4 weeks), DEP will select a number of IPI from the dynamic master list which will be used to develop a dynamic list of primary and secondary IPI.

c. The Primary and Secondary PSM IPI Lists are posted on OSHA's DEP/PSM intranet website. For inspection integrity purposes OSHA will not publicly disclose the Dynamic Master IPI List or the Primary (Primary List) and Secondary (Secondary List) PSM IPI lists that COs will utilize during their inspections. The dynamic IPI will only be posted to the intranet website listed above.

d. COs must download and use the Primary List and Secondary Lists which are listed as "Effective" at the time of the opening conference. For inspection preparation purposes, DEP will post the Primary List and Secondary List about 7 days before they become effective.

   Example: The most recent Primary List and Secondary List posted on the DEP intranet site display "Effective Date(s)" of August 1st and August 17th. The inspection opening date is August 15th. In this case, COs need to use the August 1st, Primary and Secondary Lists for their inspection because the opening date of the inspection is before the "Effective Date" of the August 17th list.

   Note: COs that cannot download the dynamic Primary List and Secondary List, should contact OSHA's Office of General Industry Enforcement.

e. COs must evaluate compliance with each item on the Primary List.

f. If one or more of the items on the Primary List is found not to be applicable to the Selected Unit(s), IPI from the Secondary List will be used to replace those IPI from the Primary List which were inapplicable. Replacement IPI from the Secondary List will be chosen from the Secondary List in numerical order, i.e., first item, second item, etc.

   Example: The Primary List has 15 inspection items. After review, a CO finds Items #3, #5 and #12 on the Primary List are not applicable to the process being evaluated. Using the Secondary List, the CO would replace the non-applicable

items on the Primary List with Items #1, #2, and #3 from the Secondary List.

c. **Expanding the Inspection**. 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). See Section J.6.i.3, below.

d. **Inspect Both Host and Contract Employers**. COs must inspect both the host employer and contract employers.

6. **Inspection Procedures**

a. **Supplemented FOM Procedures**. The procedures given in the FOM, Chapter 3, shall be followed except as modified in the following sections.

b. **Opening Conference**. Where appropriate, the facility safety and health director, Process Safety Manager, or other person capable of explaining the company's Process Safety Management Program shall be included in the opening conference. The opening conference must also include the following:

i. At the opening conference, the team leader shall verify that the establishment's SIC/NAICS code is 2911/32411 to confirm that the workplace is a refinery within the scope of this Directive.

ii. During the opening conference, COs shall familiarize themselves with the establishment's emergency response procedures and emergency alarms.

iii. COs shall also request that the management representative(s) provide them with an overview of the processes/units at the refinery, including block flow and/or process flow diagrams indicating chemicals and processes involved.

iv. To understand the basics of the employer's processes and the possible catastrophic scenarios which could occur, the team should question the management representative(s) about what catastrophic release scenarios might occur at various stages of the involved processes, what those results could be (worst case scenarios), and what controls are in place to prevent them from happening. This will assist the team when they later identify the Selected Unit(s) (see Section J.6.g below) for inspection and when they ascertain whether the company's PSM program includes adequate controls.

c. **Documentation to be Requested -- General and Process Related**. During the opening conference, the CO shall request access to the documents listed below. Initially, to expedite the inspection process, only access to documents should be requested. During the inspection, to evaluate compliance with standards, the written documentation

described below shall be requested to be provided by the employer, as appropriate, to substantiate citations.

Compliance guidance: The lists of requests below specify many types of documents and employees to interview (e.g., randomly select five operators' training records to review). These lists are not intended to limit the type and number of documents to request or the number of employees to interview. The number and type of documents to request and the number of employees to interview is at the discretion of the inspection team.

Many of the requests require the employer to provide a list of information. The intent of first requesting a list versus requesting a complete set of information on some aspect of the establishment is to limit the amount of documents that the employer would be required to produce. For example, one request is to produce a list of the pressure vessels in the Selected Unit(s). Instead of requesting the entire history file for each of the pressure vessels in a unit, COs will use the list provided by the employer to randomly select a specific number of pressure vessels to review for compliance evaluation purposes.

Documents to request:

Compliance guidance: The following document request represents documents that are typically compiled by refinery employers. While many of the documents listed below are required by the PSM standard to be maintained by the employer, some are not. Therefore, the documents requested below, may or may not be in the employer's possession. Those documents specifically required by an OSHA regulation to be kept by the employer are identified by an asterisk (*).

1. All contract employee injury and illness logs compiled since May 26, 1992 as required by 1910.119(h)(2)(vi).*

2. A list of all PSM-covered processes/units in the refinery complex.

3. 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 the chemicals which are part of their PSM-covered processes.

4. A summary description of the refinery PSM program.

5. Employer's written plan-of-action* regarding the implementation of employee participation.

6. Flow diagrams*, piping and instrumentation diagrams (P&IDs)*, including P&ID legends*, plot plans*, electrical classification* diagrams, process narrative descriptions*, and original design basis of the process*/equipment* for the Selected Unit(s) (see J.6.g. below).

7. Document(s) or a listing showing the original throughput of the refinery complex and for the Selected Unit(s). Also, inspection teams should request a listing of any throughput changes* and when the change was implemented in the Selected Unit(s).

8. 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 resolutions of findings and recommendations*.

   Compliance guidance: Any PHA performed after May 25, 1987 which 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).)

9. All PHA findings and recommendations* and the excerpted information related to previous incidents which were identified in other PHAs not included in request c.8 above*. Include documentation of resolution of PHA findings and recommendations*.

   Compliance guidance: The intent of this request is to limit the amount of requested documentation. Therefore, instead of requesting the entire PHA file as detailed in c.8 above, this request is related to the other PHAs conducted between the initial and the most recent PHA. This limits the amount of information requested in this item to the PHA findings, recommendations, resolutions, and excerpted information pertaining to previous incidents.

10. A list of the written operating procedures for safely conducting activities in the Selected Unit(s).

11. All operating procedures* involving Blowdown(s) at the refinery.

12. A list of procedures describing safe work practices for potentially hazardous operations, including, but not limited to, lockout/tagout, confined space entry, lifting equipment over process lines, capping/blinding open-ended valves/piping, opening process equipment or piping, excavation, and control over entrance, presence, and exit to/from a facility by maintenance, laboratory, or other support personnel.

13. A list of all employees (i.e., hourly and supervisory) presently involved in operating the Selected Unit(s) including names, job titles, work shifts, and the name of the person(s) to whom they report (their supervisor(s)).

14. From the list provided in c.13 above, randomly choose five employees (four hourly employees and one supervisory employee) and obtain copies of their training records for initial* and refresher training*. If any of these five randomly selected employees were involved in operating the Selected Unit(s) on May 26, 1992, and have not received initial training as per 1910.119(g)(1), obtain their certification* ("grandfather certificate") of required knowledge, skills, and abilities to safely perform their job.

15. Description of how the employer manages operator refresher training.

16. For the Selected Unit(s), obtain a listing of the Pre-startup safety reviews (PSSRs) for new facilities and for modified facilities since May 26, 1992, when the modification requires a change in the PSI.

17. From the list of PSSRs provide in response to request c.16: 1) randomly select one of the PSSRs; 2) obtain all required information* related to the randomly selected PSSR on the Selected Unit(s), if available; and 3) obtain a list of employees that received training relative to the selected PSSR.

    Compliance guidance: Required information related to PSSR includes, but is not limited to: operator training records, Management-of-Change (MOCs), PSI updates, startup checklists when required by a start-up procedure.

18. The corporate* and refinery mechanical integrity (MI) program procedures*.

    Compliance guidance: The employer is only required to have MI program procedures for the establishment's covered processes (i.e., refinery MI program procedures). However, many employers also have corporate MI program procedures which they may or may not represent as their MI program procedures for their PSM-covered process(es). If an employer uses the corporate MI procedures as part of its establishment PSM-covered process MI procedures, then PSM requires the employer to have these corporate procedures developed and implemented as part of its establishment's MI program procedures as per 1910.119(j)(2).

19. The corporate and refinery equipment deficiency management program*.

Compliance guidance: The employer is only required to have MI program procedures for the establishment's covered processes (i.e., refinery MI program procedures). If an employer utilizes either corporate or establishment refinery equipment deficiency programs/procedures as part of its establishment's MI program procedures (as required by 1910.119(j)(2)), then PSM requires the employer to have these corporate and refinery procedures developed and implemented as part of its establishment MI program procedures.

20. All MI procedures (program and task specific instructions)* related to the inspection, testing, servicing, repair, alteration of pressure vessels, piping and relief system equipment.

21. The Owner-User quality assurance inspection manual for pressure vessels* (RAGAGEP for pressure vessel inspections include for example, API 510. Section 4.3 of API 510 requires an Owner-User quality assurance manual for pressure vessel inspections).

22. The Owner-User quality assurance inspection manual for piping* (RAGAGEP for piping inspections include for example, API 570. Section 4.3.1 of API 570, requires an Owner-User quality assurance manual for piping inspections).

23. The documented quality control system(s) of each of the relief valve repair organizations that the employer has utilized in the past five years.

    Compliance guidance: API 510, Section 3.16 defines the qualifications required for a repair organization. Some legal jurisdictions, e.g., states, specify the required qualifications for a pressure vessel and pressure relief valve repair organization.

24. A list of the Selected Unit(s) relief devices* including, 1) the inspection interval for each relief device* as required by the MI procedure for inspecting relief devices (based on the service requirements, as relief devices can have differing inspection intervals, and therefore, each relief device must have its own inspection interval documented as part of the MI procedure); 2) the dates of the last two inspections for each relief device*; and 3) the date of the next scheduled inspection of each relief device*.

    Compliance guidance: The PSM standard does not require a listing of each relief device, however, 1910.119 requires that each relief device in a PSM-covered process be included in the PSI.

25. From the list of Selected Units(s) relief devices from above (c.24), select five relief devices and obtain copies of each of their original design and design basis*.

26. A list of all pressure vessels* in each of the alkylation unit(s) and the Selected Unit(s). Include in this listing(s):

    1) the age of each pressure vessel* based on when it was first put in-service at the refinery or some other location;

    2) the normal operating pressure of each pressure vessel*;

    3) the normal operating temperature of each pressure vessel*;

    4) an indication as to whether each of the specific pressure vessels is insulated*;

    5) an indication as to whether each of the specific pressure vessels has integrally bonded liners such as strip lining or plate lining*;

    6) the inspection interval for each pressure vessel* as required by the MI procedure for pressure vessel inspections (based on the service requirements, pressure vessels can have differing inspection intervals; therefore, each pressure vessel must have its own inspection interval documented as part of the MI procedure);

    7) the dates of the last two inspections for each pressure vessel*; and

    8) the date of the next scheduled inspection of each pressure vessel*.

    Compliance guidance: The PSM standard does not require a listing of each pressure vessel, however, 1910.119 requires that each pressure vessel in a PSM-covered process be included in the PSI.

27. From the list of pressure vessels in the Selected Unit(s) and the alkylation unit(s), randomly select **one** pressure vessel from each of the following categories:

    1) The three oldest (in terms of when they were first put into service at the refinery) pressure vessels in the Selected Unit(s);

    2) The three pressure vessels which operate at the highest pressures in the Selected Unit(s);

    3) The three pressure vessels which operate at the highest temperature in the Selected Unit(s);

4) The three oldest (in terms of when they were first put into service at the refinery) pressure vessels in the Selected Unit(s) which have integrally bonded liners (e.g., strip lined);

5) The three oldest (in terms of when they were first put into service at the refinery) pressure vessels in the alkylation unit(s); and

6) The three pressure vessels which operate at the highest pressures in the alkylation unit(s).

For each of the randomly selected pressure vessels selected from the categories above, obtain the complete history file* for each vessel which contains all the PSI applicable to those vessels, including construction and design information, operating and inspection history repair, alteration and rerating information, and any fitness-for-service assessments.

28. A list of all Blowdown(s) in the refinery.

    Compliance guidance: The PSM standard does not require a listing of each Blowdown, however, 1910.119 requires that each Blowdown in a PSM-covered process be include in the PSI.

29. The original design and design basis* for each of the Blowdown(s) in the refinery.

    Compliance guidance: The PSM standard, 1910.119(d)(3)(i)(D), requires an original design and design basis for all components of a relief system including each Blowdown(s) which are part of a PSM-covered process.

30. Hot work permit programs and any active permit(s)* issued for the Selected Unit(s).

31. A list of work orders or the equivalent for the past three years in the Selected Unit(s). Divide the list into "open" and "completed" work orders.

32. A list of written MOC procedures to manage changes for process chemicals, technology, equipment, procedures, and changes to facilities that affect any covered process in the Selected Unit(s) since May 26, 1992.

33. Incident investigation reports* as required by 1910.119(m) for the Selected Unit(s), including resolutions* and corrective actions*.

    Compliance guidance: 1910.119(m)(7) requires incident investigation reports to be retained for five years. However, 1910.119(e)(3)(ii) requires the employer to identify in every one

of its PHAs, all incidents which had the likely potential for catastrophic consequences.

34. Written emergency action plan per 1910.38(a)* and written emergency response plan per 1910.120(q)*.

35. The two most recent compliance audit reports*, appropriate responses to each of the findings*, and verifications* that deficiencies have been corrected.

36. A list of the employer's HAZWOPER responders per its ERP. Designate which employees are qualified at the following levels: first responder awareness, first responder operations, hazardous materials technician, hazardous materials specialist, and on-scene incident commander.

37. Selected product piping information, based on a random selection of five piping circuits. See Question E.1., in Appendix A, for the required information.

38. EPA's release reports, see Compliance guidance, below.

    Compliance guidance: Review EPA's Toxic Release Inventory (TRI) database for the employer's reported releases in the three most recent years available. Releases are reported by individual chemicals aggregated over a one-year period. If the review indicates there was a large aggregate quantity of a material released (e.g., 100,000 pounds of cyclohexane) in one of the years reviewed, request the individual release reports from the employer that would identify the specifics of each release that would account for the aggregate quantity reported.

39. Other documents deemed necessary by the inspection team to determine compliance.

    Compliance guidance: The inspection team may request other documents for its compliance evaluation including those documents deemed necessary to evaluate compliance of those IPI included in the Primary and Secondary PSM IPI Lists ("Dynamic List Based Evaluation").

d. **PSM Overview**. Prior to beginning the initial walkaround inspection, the team shall request an explanation of the company's PSM Program including, at a minimum:

   i. A briefing on the elements of the PSM standards and how the refinery implements them;

   ii. Identification of which personnel are responsible for implementing the standards' various elements;

iii. A description of company records used to verify compliance with the standards;

iv. A review of the written summary description of the PSM program.

e. **Personal Protective Equipment (PPE) and Camera/Video Use.** In addition to normal inspection protective equipment, COs conducting these inspections shall be provided with flame-retardant coveralls for protection from flash fires. PPE shall be appropriate to the workplace environment.

i. COs shall wear flame-retardant coveralls in all areas of the plant where there is potential for flash fires and as may be required by company policy.

[Note: Clothing made of hazardous synthetic fabrics should not be worn underneath flame-retardant coveralls.]

ii. Prior to the initial walkaround inspection, COs must review the employer's operating procedures for PPE selection in the Selected Unit(s) and/or areas of the facility the CO will be inspecting. COs should 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 employer's PPE requirements and the use of flame-retardant coveralls for the Selected Unit(s) and other areas to be inspected shall constitute the baseline PPE requirements for COs conducting walkaround inspections.

If the employer's operating procedures require a respirator for entry into an area covered by the procedure, or in the CO's judgment, a respirator should be worn in the area, then the CO must obtain the required type of respirator and have received proper training in the use of the respirator prior to entry into the area.

iii. Unless as provided below, COs shall ensure that any still cameras and/or video cameras are intrinsically safe for use in the process areas being inspected.

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

If the employer allows the use of non-intrinsically safe cameras in hazardous (classified) locations, then COs 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.

Any time the concentration of flammable gas or vapor exceeds

10 percent of the LFL, COs must not use non-intrinsically safe cameras or other similar equipment.]

f. **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. The initial walkaround should:

i. provide COs with a correlation between the PSM overview discussion and the actual conditions existing in the various covered processes/process units;

ii. provide information for the selection of the process units to be inspected;

iii. give COs a basic overview of the facility operations;

iv. allow COs to observe potential hazards such as pipework at risk of impact, corroded or leaking equipment, unit or control room siting and trailer location, relief devices and atmospheric vents such as Blowdown stacks and relief valves that discharge to atmosphere, and on-going construction and maintenance activities; and

v. allow COs an opportunity to solicit input from the employee representatives and contract employees concerning potential PSM program deficiencies.

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

g. **Selection of Unit(s)**. Based on input from the Level 1 Team Member, the Team Leader shall select one or more PSM-covered processes to evaluate for compliance with the standard. The covered process(es) selected to be evaluated are termed the Selected Unit(s). Typically the Selected Unit(s) will be operating units, not storage units/areas (i.e., tank farms), unless there is significant evidence that suggests that a storage unit/area is much more at risk of a catastrophic release than other refinery operating units. This selection shall be based on the factors listed below, and shall be documented in the case file:

i. nature (e.g., tendency to form unconfined vapor cloud, high toxicity, operating pressures and temperatures) and quantity of chemicals involved;

ii. incident reports and other history;

iii. lead operators' input;

iv. age of the process unit;

v. factors observed during the walkaround;

vi. employee representative input;

vii. number of employees present;

viii. existence of Blowdown(s); and

ix. current hot work, equipment replacement, or other maintenance activities.

Based on the employer's response to J.6.c.2 and 3, above, and other information such as discussions with process engineers and unit lead operators, the Level 1 Team Member will independently verify that the Selected Unit(s) are PSM-covered processes. This determination must be documented in the case file.

Compliance guidance: Based on incident histories at refineries, it is not intended that the key analysis for choosing the Selected Unit(s) be a resource-intensive activity. One of the last major disasters at a refinery in the U.S. occurred at what was thought to be one of the safer units in the refinery complex. Therefore, while the team leader should attempt to identify the most hazardous processes in the refinery using the criteria listed above, the criteria only guide the selection process.

If Blowdown(s) exist at the refinery, but they are not located in the Selected Unit(s), the team leader must assure that: 1) the number of Blowdown(s) and their respective locations (i.e., the unit they are located in) are documented in the case file; and 2) at least one Blowdown which is part of a PSM-covered process is evaluated for compliance using the IPI contained in Appendix A, Section C and the Primary and Secondary PSM IPI Lists. To accomplish this compliance evaluation of a Blowdown which is not part of the Selected Unit(s), the Team Leader will randomly select at least one of the Blowdown(s) in one or more of the other PSM-covered processes.

h. **Inspection of Contractors**. All contractors (including subcontractors) working on or adjacent to the Selected Unit(s) shall be inspected. COs need to use the applicable IPI contained in Appendix A and those applicable IPI specified by the Primary and Secondary PSM IPI List described in Section J.5.b.2 above, when evaluating contract employer compliance.
If there are no contractors working on or adjacent to the Selected Unit(s) 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 per the requirements of the above paragraph.

Compliance guidance: Construction contractors working on or adjacent to the Selected Unit(s), must also be inspected per the above paragraphs.

i. **Compliance Guidelines**. Guidelines for assessing and verifying compliance with PSM standard provisions are provided in Appendix A of this Directive, an inspection priority item evaluation described in i.ii below, and in CPL 02-02-045. When conducting PSM compliance evaluations of the Selected Unit(s):

i. COs must use the guidance contained in mandatory Appendix A of this Directive. This static list-based evaluation is a gap analysis formatted in a series of questions to facilitate the evaluation of various inspection priority items (IPI) related to PSM.

ii. COs must use the guidance related to the dynamic list-based evaluation described in Section J.5.b.2 above. This dynamic list-based evaluation of this LEP is mandatory and is a gap analysis formatted in a series of questions to facilitate the evaluation of various (IPI) related to PSM.

a. Like Appendix A, each gap analysis question for this dynamic list-based evaluation has three possible answers: Yes, No, and Non-Applicable (N/A). See Appendix A, *CO Instructions* for a discussion related to how COs are to respond to the questions presented in the Primary and Secondary PSM IPI Lists.

b. COs will address each of the questions on the Primary IPI List by documenting a Yes, No, or N/A response.

c. If questions on the Primary IPI List are not applicable to the Selected Unit(s), the Team Leader will replace the non-applicable items with items from the Secondary IPI List as described in Section J.5.b.2.

d. If other prima facie elements of a violation are established, the employer shall be cited for each "No" response to each question in the IPI list.

Compliance guidance: The specific violation to cite (e.g., 1910.119(j)(2)) will normally be one of the corresponding "Possible Standards Violated" that are listed with the particular question on the IPI list. However, depending on the fact finding, a CO may determine that an alternate standard not listed in the "Possible Standards Violated" is more appropriate. In this case, the CO may cite the alternate standard. The CO shall document the reason for using the alternate standard.

iii. **Expanded Inspection**. During the course of the compliance evaluation described above, if the Team Leader determines that a large number of deficiencies exist in the employer's PSM compliance, the inspection may be expanded to other Selected

Unit(s) after the Team Leader consults with the Compliance Manager.

iv. **Hazardous Conditions or Violations Not Addressed by IPI or the FOM** If hazardous conditions or violations of OSHA standards are discovered that are not specifically addressed in this Directive (*i.e.*, IPI contained in Appendix A or those specified by the Primary or Secondary PSM IPI List described in Section J.5.b.2., or the required inspection items identified in the FOM then these conditions or violations may also be cited.

j. **Citations**. Citations for violations of the PSM standard shall be issued in accordance with the FOM, with the following additional directions:

i. **Classification**. 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.

ii. Any violation of the PSM standard is a condition which could kill or seriously harm employees.

iii. Accordingly, violations of the PSM standard shall not normally be classified as "other-than-serious."

K. IMIS Recording: Information pertaining to Health and Safety Hazards in the Petroleum Refining Industry (NAICS 32411) shall be recorded in the IMIS using current instructions in the IMIS manual. The identifier code will be "REFINERY".

1. The identifier "REFINERY" will be recorded in item 25c on the OSHA-1 form for all LEP inspections.

2. The appropriate strategic plan code "REFINERY" will also be coded in block 25f of the OSHA-1, to link with the strategic plan.

L. Evaluation: An evaluation of the effectiveness of this local emphasis program will be conducted at the end of each fiscal year. An evaluation report will be written and submitted to the Bureau Chief within 30 days of the end of each fiscal year. Information to be provided in the report shall include:

1. name of company and location;

2. inspection number;

3. opening date of inspection;

4. identification of each citation issued in response to the Inspection Priority Items listed in Appendix A ("Static List") and the Primary and Secondary

PSM IPI List ("Dynamic List") posted on the DEP intranet website (See Section J.5.b);

5. listing of the Selected Unit(s) that were evaluated for compliance during the LEP inspection;

6. the number of Blowdown(s) at the refinery and how many of them were evaluated as part of the LEP inspection; and

7. list of how many actual and near-miss PSM incident investigations have been conducted as a result of an incident at the Selected Unit(s).

By and Under the Authority of

Mary Uhl

Mary Uhl
Chief, Occupational Health and Safety Bureau