

OSHA's Refinery & Chemical National Emphasis Programs

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National Emphasis Programs

- Provide for planned inspections in high hazard industries
- Focus efforts on specific hazards
- Refinery NEP focuses on implementation of PSM in Refineries
- Chemical NEP focuses on implementation of PSM in all other PSM covered facilities



Comparison of Refinery and Chem NEPs to Prior PSM Inspections

- NEPs are the most significant PSM enforcement actions since the standard was promulgated in 1992
- Significant differences between current effort and pre-2007 inspections:
 - 73% of early inspections were initiated due to accidents, complaints or referrals.
 - Almost all Refinery NEPs were program planned



Comparison of Refinery and Chem NEPs to Prior PSM Inspections

- NEP inspections have more violations and higher penalties than prior PSM OR PQV inspections:

Type of PSM Inspection Program	Citations per Inspection	Penalty per Inspection
Refinery NEP	11.2	\$76,800
Chem NEP	8.4	\$31,600



Refinery NEP

- Originally launched June 7, 2007
- Last inspections completed in 2011
- Combined “static” and “dynamic” question lists with guidance for compliance officers (CSHOs)
- Compliance found to be highly uneven



Top Refinery NEP Cited PSM Elements

<i>Element</i>	<i>Description</i>	<i>Number</i>	<i>%</i>
j	Mechanical Integrity	198	19.5%
d	Process Safety Information	177	17.4%
f	Operating Procedures	174	17.1%
e	Process Hazard Analysis	168	16.5%
l	Management of Change	92	9.0%
m	Incident Investigation	68	6.7%
h	Contractors	44	4.3%
o	Compliance Audits	41	4.0%



Top 12 Refinery NEP Cited PSM Sub-elements

Sub-element	Description	Number	%
119(d)(3)(ii)	Compliance w/ RAGAGEP	71	7.0%
119(j)(5)	Correction of deficiencies	63	6.2%
119(e)(5)	PHA findings not addressed	52	5.1%
119(l)(1)	MOC not established/implemented	39	3.8%
119(d)(3)(i)(B)	P&IDs missing / incorrect	37	3.6%
119(j)(2)	No written MI procedures 45% of PSM citations	38	3.7%



Lessons Learned

- **Main Challenge – Refinery NEP hours 40 times greater than average OSHA inspection**
 - 1000 hours for REF NEP inspection
 - 25 hours for average OSHA inspection
- **Learnings**
 - **List based approach** does find hazards
 - The listed questions also result in many “**off-script**” citations
 - CSHO training works
 - OSHA focus on **RAGAGEP** resulted in large number of deficiencies
 - **Facility Siting** still a problem 20+ years after SHELL-Norco & Phillips-Pasadena



Other Learnings from the Refinery NEP

- Citations in the NEP reflect the focus on PSI, Incident Investigation, and the various elements involving RAGAGEP and improved CSHO training
- Refineries are not resolving PHA and audit findings and recommendations at a rate expected of large, sophisticated employers



PSM-Covered Chemical Facilities National Emphasis Program

The “Chem NEP”



Chem NEP

- Pilot Chem NEP effective July 27, 2009
- Extended **nationwide** Nov. 29, 2011
- **Less** resource-intensive
- State plan participation is required
 - Federal program or develop one that is *equally protective*
- CSHO's check abatement of PSM citations requiring abatement going back six years



Chem NEP Approach

Differs from Refinery NEP

- Intent is to perform a larger number of shorter, less resource intensive, inspections
- A small number of “dynamic” list questions are applied to a selected unit or units
- No static list questions



Chem NEP Approach

- Questions are specific and contain compliance guidance (similar to Refinery NEP)
- Questions differ by type of facility
 - Ammonia refrigeration
 - General PSM
 - Chemical Processing
- Questions change periodically



Chem NEP Inspections – November 2011 (Completion of Pilot)

- 173 inspections issued citations
- Average 8.4 citations per inspection with citations
- Average \$31,587 in proposed penalties per inspection with citations



Chem NEP Inspections – November 2011

- >60 standards cited:
- 5 major standards categories
 - 1910 General Industry
 - 1904 Record Keeping
 - 5a1 General Duty
 - 1926 Construction
 - 1903 Inspections (abatement verification)
- 1,487 total proposed violations
- \$5,464,553 total proposed penalties



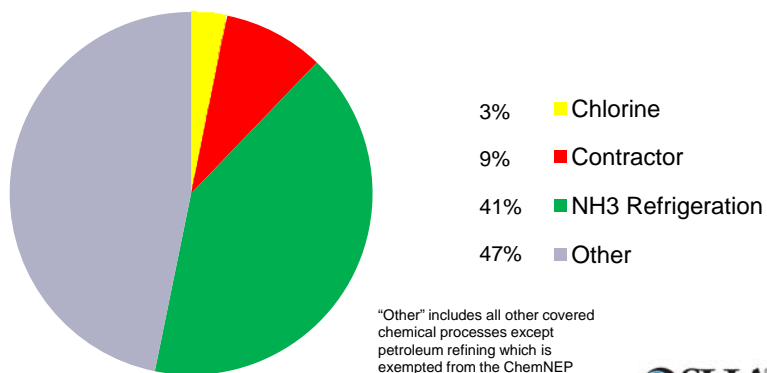
Top Twelve 1910 Standards Violated

	Description	#	Cum %
1910.119	Process Safety Management	891	59.9
1910.147	Lockout / Tagout	55	63.6
1910.120	Haz Waste & Emergency Response	47	66.8
1910.134	Respiratory Protection	36	69.2
1904.029	Forms (Record Keeping)	31	71.3
1910.023	Guarding Openings	31	73.4
1910.305	Electrical	22	74.8



Chem NEP Inspections – Facility Type

**Total Inspections
(programmed + unprogrammed)**



Chem NEP Citations by PSM Element

Element	Description	% of PSM Citations
j	Mechanical Integrity	23.2%
d	Process Safety Information	20.9%
e	Process Hazard Analysis	15.8%
f	Operating Procedures	14.0%
l	Management of Change	5.5%
o	Compliance Audits	4.5%
g	Training	3.8%
h	Contractors	3.4%
c	Employee participation	2.8%
m	Incident Investigation	2.6%
n	Emergency Planning & Response	1.8%
i	Pre-startup Review	1.1%

