



Memo #1: Recommendations to Improve the Washington State PSM Proposal: Addressing Changes Made to Key California Text

March 22, 2018

Summary:

There are weaknesses in the Washington PSM proposal that result from changes made by Washington Dept. of Labor and Industry (L&I) to the California PSM text. This document summarizes most of those changes and recommends corrective actions.

Reference (1):

The document references Washington PSM version *PSMDraft1918*:
<http://www.lni.wa.gov/Safety/GrantsPartnerships/Committees/PDFs/PSMDraft1918.pdf>.

Reference (2):

The document references California General Industry Safety Order (GISO) §5189.1, *Process Safety Management for Petroleum Refineries*:
<https://www.dir.ca.gov/OSHSB/documents/Process-Safety-Management-for-Petroleum-Refineries-txtbrdconsider.pdf>.

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Introduction:

The language of the Washington PSM proposal contains three types of text conditions: (1) text that is harmonized precisely with the California PSM for Petroleum Refineries, GISO §5189.1; (2) text that modifies the California PSM text by omitting or amending certain words or sentences; and (3) new text introduced by Washington L&I that does not appear in the California PSM text.

This document focuses on condition #2. We present 21 cases where we believe omitted or amended text introduces weaknesses into the WA proposal, relative to the CA text. Some of these weaknesses are substantial enough that they could undermine the effectiveness of the regulation.

Because this document does not address conditions #1 or #3, it does not reflect the full scope of our recommendations. We do not present weaknesses in the CA text that could be strengthened in the WA proposal, for example, nor do we discuss here how new WA text (that does not appear in the CA regulation) could be strengthened.

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Item	Page	Subsection	Issue and Corrective Action	Rationale
1	1	Purpose	<p>Issue: The following CA text is missing: <i>“This section contains requirements for petroleum refineries to reduce the risk of major incidents and eliminate or minimize process safety hazards to which employees may be exposed.”</i></p> <p>Corrective Action: We prefer the following language, which we proposed but CA did not adopt: <i>“This section contains requirements for petroleum refineries to prevent major incidents and eliminate or minimize process safety hazards to which employees may be exposed.”</i> This text sets a clearer expectation that major incidents are to be prevented.</p> <p>However, in the interest of harmonizing the CA and WA texts, we would support the use of the current CA Scope and Purpose text: <i>“This section contains requirements for petroleum refineries to reduce the risk of major incidents and eliminate or minimize process safety hazards to which employees may be exposed.”</i></p>	<p>The proposed WA <i>Purpose</i> is as follows: <i>“This chapter contains requirements for preventing and minimizing the consequences of releases of toxic, reactive, flammable, or explosive chemicals or materials in the petroleum refining industry.”</i> This is also the text of the existing WA PSM regulation.</p> <p>This language does not reflect the updated, <i>prevention</i> focus of the new WA PSM text, much of which is intended to drive down the <i>likelihood</i> side of the <i>consequence x likelihood</i> risk equation. “Preventing and minimizing the <i>consequences</i>” of releases is less protective than preventing releases from occurring in the first place. The text of the proposed regulation itself focuses almost entirely on reducing the likelihood of a release by requiring refiners to implement measures to correct process safety hazards. While the regulation includes an Emergency Response subsection and requirements for emergency operating procedures, it does not, in the main, focus on measures to reduce harm once a release has occurred.</p>
2	4	Definition of	Issue:	Partial or unplanned shutdowns can contain

		“Process”	<p>The following CA text is missing: <i>“This definition includes processes under partial or unplanned shutdowns.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	highly hazardous materials and can present serious process safety hazards. They should fall under the scope of the PSM regulation.
3	5	Definition of “RAGAGEP”	<p>Issue: WA has added the following phrase: <i>“...unless they are documented as meeting or exceeding external provisions.”</i></p> <p>Corrective Action: Consider removing this phrase.</p>	While internal employer standards can certainly meet or exceed RAGAGEP, they do not constitute RAGAGEP. Internal employer standards, by definition, are neither “recognized” nor “generally accepted” within industry. The addition of this phrase to the definition of RAGAGEP could also introduce ambiguity in the interpretation RAGAGEP as it is applied in the Mechanical Integrity subsection.
4	6	Definition of “Safeguard Protection Analysis (SPA)”	<p>Issue: WA has added this definition and introduced a <i>“risk tolerance criteria”</i> concept into the proposal and the SPA.</p> <p>Corrective Action: Considering removing this definition, or redraft it without relying on the <i>“risk tolerance criteria”</i> phrase.</p>	“Risk tolerance criteria “is a concept that is internally derived by the employer and could be in conflict with RAGAGEP for SPAs. This phrase also introduces a concept that is otherwise undefined in the regulation, which could introduce ambiguity between the definition and the way SPAs are performed in accordance with the PHA subsection.
5	8	Employee	Issue:	As part of an investigation or complaint, it is

		Collaboration	<p>The following CA text is missing at 5(d): <i>“Written reports of hazards and the employer’s response.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>useful for the Division to be able to access written reports submitted by workers of process safety hazards, along with documentation of the employer’s responses. This information can supplement the other three documentation requirements listed in the proposal.</p>
6	10	Process Safety Information (PSI)	<p>Issue: The following CA text is missing at 3(c): <i>“If the employer installs new process equipment for which no RAGAGEP exists, the employer shall document that this equipment is designed, constructed, installed, maintained, inspected, tested and operating in a safe manner.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>Omitting this sentence could make it permissible for an employer to install new equipment that might be inappropriate for its intended purpose and does not meet RAGAGEP.</p>
7	10	Process Hazard Analysis (PHA)	<p>Issue: The following CA text is missing at (1): <i>“All initial PHAs for processes not previously covered by this chapter shall be completed within three years of the effective date of this chapter, in accordance with this subsection.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>The Appendix A of “covered chemicals” and “threshold quantities” was removed from the CA PSM regulation. This sentence in the CA PHA subsection thereby extends the scope of the regulation to those processes that were previously exempted because they did not contain a chemical listed under Appendix A, or the chemical was present at levels below the listed threshold quantity. Sulfuric acid, for example, does not appear in Appendix A and</p>

				was previously exempted. It is appropriate to require a new PHA for previously uncovered processes. Because the WA proposal also removes Appendix A and threshold quantities, it should require the employer to conduct PHAs for previously uncovered process. This sentence meets this objective.
8	11	Process Hazard Analysis (PHA)	Issue: WA has added the following text at 2(g): <i>“An appropriate equivalent methodology.”</i> Corrective Action: Consider adopting the CA text.	This sentence appears as follows in the CA text: <i>“Other PHA methods recognized by engineering organizations or governmental agencies.”</i> The WA text is more permissive, and it could place the “burden of proof” with DOSH in demonstrating that the employer’s method is <i>not</i> an “appropriate, equivalent methodology.”
9	11	Process Hazard Analysis (PHA)	Issue: WA uses the term “may” where CA uses “shall” at (2), regarding PHA methodologies. Corrective Action: Consider adopting the CA text.	Allowing for an unlimited universe of potential PHA methodologies could place the burden of proof with DOSH in assessing the efficacy of each PHA method for its intended use in the plant.
10	13	Process Hazard Analysis (PHA)	Issue: The following CA text is missing at (15): <i>“Except as required in (6), the employer must implement all PHA recommendations in accordance with the Implementation</i>	A requirement pertaining to implementation appears in the HCA and DMR subsections of the WA proposal. By dropping this requirement from the PHA subsection, WA has introduced an internal “difference” within

			<p><i>subsection.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>the proposed regulation regarding the obligation of the employer to implement recommendations made by a PHA team. This difference could be interpreted to mean that PHA recommendations are not necessarily bound by the timelines and other requirements of the <i>WA Implementation</i> subsection.</p>
11	15	Operating Procedures	<p>Issue: The following CA text is missing at (2): <i>“Changes to Operating Procedures must be managed in accordance with the MOC requirements of subsection ----.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>Changes to operating procedures can introduce process safety hazards and should therefore be subject to the MOC procedure.</p>
12	15	Operating Procedures	<p>Issue: The following CA text is missing at (4): <i>“(5) The Operating Procedures shall include emergency procedures for each process, including any response to the over-pressurizing or overheating of equipment or piping, and the handling of leaks, spills, releases and discharges of highly hazardous materials. These procedures shall provide that only qualified operators may initiate these operations, and that prior to allowing</i></p>	<p>This provision introduces the following three elements pertaining to emergency response: <i>(A) Define conditions for handling leaks, spills or discharges that provide a level of protection that is functionally equivalent to, or safer than, shutting down or isolating the process;</i> <i>(B) Isolate any vessel, piping and equipment where a leak, spill or discharge is occurring; or,</i> <i>(C) Shutdown and depressurize all process operations where a leak, release or discharge is occurring.</i></p>

			<p><i>employees in the vicinity of a leak, release or discharge, the employer shall, at a minimum, do one of the following...”</i></p> <p>Corrective Action: Adopt the CA text pertaining to emergency procedures in the Operating Procedures.</p>	<p>WA has retained these three elements but has conflated them with safe work practices and has constructed an ambiguous, grammatically non-parallel list for this provision.</p>
13	18	Pre-Startup Safety Review (PSSR)	<p>Issue: The following CA text is missing at (1): <i>“...and for partial or unplanned shutdowns. The employer shall also conduct a PSSR for all turnaround work performed on a process.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>Conducting a PSSR after a partial or unplanned shutdown, and after a turnaround, is important to prevent process failures from occurring that might be related to, or be triggered by, process or equipment changes or conditions that were introduced during the shutdown or turnaround.</p>
14	18	Pre-Startup Safety Review (PSSR)	<p>Issue: The following CA text is missing at 2(b): <i>“Process equipment has been maintained and is operable in accordance with design specifications.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>This sentence is needed to ensure the mechanical and operational integrity of process equipment prior to restarting the process, in addition to the process itself.</p>
15	25	Incident Investigation—Root Cause	<p>Issue: The following CA text is missing at (9): <i>“The employer must implement all</i></p>	<p>A requirement pertaining to implementation appears in the HCA and DMR subsections of the WA proposal. By dropping this</p>

		Determination	<p><i>recommendations in accordance with the Implementation subsection.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>requirement from the Incident Investigation subsection, WA has introduced an internal “difference” within the proposed regulation regarding the obligation of the employer to implement recommendations made by an Incident Investigation team. This difference could be interpreted to mean that the team’s recommendations are not necessarily bound by the timelines and other requirements of the <i>WA Implementation</i> subsection.</p>
16	26	Compliance Audits	<p>Issue: The following CA text is missing at (5): “<i>The employer must implement all recommendations in accordance with the Implementation subsection.”</i></p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>A requirement pertaining to implementation appears in the HCA and DMR subsections of the WA proposal. By dropping this requirement from the Compliance Audits subsection, WA has introduced an internal “difference” within the proposed regulation regarding the obligation of the employer to implement recommendations made as part of a Compliance Audit. This difference could be interpreted to mean that Compliance Audit recommendations are not necessarily bound by the timelines and other requirements of the <i>WA Implementation</i> subsection.</p>
17	26	Trade Secrets	<p>Issue: WA has introduced a <i>Trade Secrets</i> subsection that is not part of the CA PSM.</p>	<p>Some refinery employers in CA are requiring employees and employee representatives to sign confidentiality agreements for PSM policies and procedures developed under the</p>

			<p>Corrective Action: Consider replacing the WA <i>Trade Secrets</i> subsection with the following CA text, which is found in the CA <i>Employee Participation</i> subsection: <i>“Nothing in this subsection shall preclude the employer from requiring an employee or employee representative to whom information is made available under subsection (q)(1)(C) to enter into a confidentiality agreement prohibiting him or her from disclosing such information, as set forth in CCR Title 8, Section 5194(i).”</i></p> <p>Section 5194(i) refers to the California Hazard Communication standard.</p>	<p>new PSM regulation. This is preventing refinery workers and their representatives from sharing and developing best process safety practices. We also believe it represents an inappropriate application of the trade secret provisions of CCR Title 8, Section 5194(i) (CA Hazardous Communication Standard), which are intended to (1) protect the identity of unique chemical ingredients, and (2) provide a mechanism for health care professionals to access this unique chemical information on as-needed basis. It’s possible that the extensive Trade Secret subsection proposed in WA could be used by employers in a similar way; i.e., to bar employees from sharing best practices in the development, implementation and maintenance of PSM policies and procedures.</p>
18	32	Hierarchy of Hazard Controls Analysis (HCA)	<p>Issue: The CA implementation requirement has been amended from: <i>“The employer shall implement all recommendations in accordance with subsection (x),”</i> to read: <i>“The employer must implement all recommendations.”</i></p> <p>Corrective Action: Consider using the wording for this sentence</p>	<p>To avoid ambiguity, the implementation text in the HCA subsection should reflect the exact wording of the implementation text in the DMR subsection.</p>

			as it appears in the DMR subsection for each subsection where a PSM team generates recommendations that link to the <i>Implementation</i> subsection; i.e., PHA, SPA, DMR, HCA, Incident Investigation and Compliance Audits.	
19	32	Process Safety Culture Assessment (PSCA)	<p>Issue: The CA text has been altered at (3), effectively shifting the safety culture consultation function from the PSCA team to the employer.</p> <p>Corrective Action: Consider adopting the following CA language: <i>“The employer shall provide for employee participation, pursuant to subsection (q). The team shall consult with at least one employee or another individual with expertise in assessing process safety culture in the petroleum refining industry.”</i></p>	The PSCA consultation function is a responsibility of the PSCA team, not the employer. This distinction is reflected in the CA text at (3).
20	35	Management of Organizational Change (MOOC)	<p>Issue: There is a comma missing in line two at (2), at “...classification of <u>employees, changing</u> shift duration...”</p> <p>Corrective Action: Consider inserting a comma between “employees” and “changing.”</p>	This is a grammatical error in the CA text that has been transmitted to the WA text.

21	36	Implementation	<p>Issue: The WA text replaces the term “recommendations” in (1) as used in the CA text, with the phrase, “process safety performance indicators.”</p> <p>Corrective Action: Consider adopting the CA text.</p>	<p>In six subsections of the WA proposal and the CA regulation (PHA, SPA, DMR, HCA, Incident Investigation and Compliance Audits) PSM teams are charged with developing <i>recommendations</i>, to which the employer must respond according to the requirements of the <i>Implementation</i> subsection. PSM teams do not develop “process safety performance indicators.” By introducing this phrase at (1) in the <i>Implementation</i> subsection, the WA proposal creates a disconnect between the recommendations of the PSM teams and the obligation of the employer to take corrective action in response to those recommendations, as required by the provisions of the implementation subsection. This could allow the employer to effectively disregard the recommendations of the PSM teams.</p>