

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

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FINAL STATEMENT OF REASONS

CALIFORNIA CODE OF REGULATIONS

TITLE 8: New Section 5189.1 of the General Industry Safety Orders

Process Safety Management for Petroleum Refineries

UPDATE OF INITIAL STATEMENT OF REASONS

Pursuant to Government Code Section 11346.9(d), the Board incorporates the Initial Statement of Reasons prepared in this rulemaking.

MODIFICATIONS RESULTING FROM THE 45-DAY PUBLIC COMMENT PERIOD (July 15, 2016 – September 15, 2016)

On September 15, 2016, the Standards Board held a Public Hearing to consider revisions to Title 8 of the California Code of Regulations, by adding new Section 5189.1 of the General Industry Safety Orders. The Standards Board received oral and written comments on the initial proposed text. The following subsections were modified following the initial public comment period and circulated for additional comment: (c), (d), (e), (f), (g), (h), (i), (j), (k), (l), (n), (o), (q), (r), (s), (t), (v), and (x). The Department of Industrial Relations has worked collaboratively with various stakeholder groups to develop the following proposed modifications.

subsection	Initial Proposed Text	Proposed Modifications	Justification
c	Employee Representative. A union representative, where a union exists, or an employee-designated representative in the absence of a union. The term is to be construed broadly, and may	Employee Representative. A union representative, where a union exists, or an employee-designated representative in the absence of a union <u>that is on-site and qualified for the task</u> . The term is to be construed broadly, and may include the local union, the international union, or a refinery or contract employee	This is necessary to clarify the definition. Employees are entitled to select representatives of their choosing where a union exists. In the absence of a union, employee-designated representatives must be onsite and qualified for the task. Employees and employee representatives must meet the qualifications provided for under the various subsections

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	include the local union, the international union, or a refinery or contract employee designated by these parties, such as the safety and health committee representative at the site.	designated by these parties, such as the safety and health committee representative at the site.	of the proposal. The proposed modification does not limit an employer's rights and remedies to protect trade secrets.
c		Add to definition section: <u>Hierarchy of Hazard Control. Hazard prevention and control measures, in priority order, to eliminate or minimize a hazard. Hazard prevention and control measures ranked from most effective to least effective are: First Order Inherent Safety, Second Order Inherent Safety, and passive, active and procedural protection layers.</u>	This definition is necessary to ensure that refineries evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. This definition clarifies the prioritization of inherent safety measures over passive, active, and procedural safeguards. It is necessary to clarify the term since it is used throughout the regulation and requirements of the analysis are outlined in subsection (I).
c	Major Change. Any of the following: · Introduction of a new process, new process equipment, or new highly hazardous material; · Any change in operation outside of established safe operating limits; or,	Major Change. Any of the following: · Introduction of a new process, new process equipment, or new highly hazardous material; · Any change in <u>operational change</u> outside of established safe operating limits; or,	This is necessary to clarify the type of change outside of safe operating limits that may constitute a "Major Change." Major Changes are key triggers for certain analyses under the regulation. Major Change specifically triggers requirements in Damage Mechanism Review, Hierarchy of Hazard Controls,

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	<ul style="list-style-type: none"> Any alteration that introduces a new process safety hazard or worsens an existing process safety hazard. 	<ul style="list-style-type: none"> Any alteration that introduces a new process safety hazard or worsens an existing process safety hazard. 	<p>Management of Change and Human Factors. As a performance based regulation, the employer is given flexibility to evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definition can impact existing processes and must be evaluated to ensure safe operation.</p>
c	<p>Major incident. An event within or affecting a process that causes a fire, explosion or release of a highly hazardous material and has the potential to result in death or serious physical harm.</p>	<p>Major Incident. An event within or affecting a process that causes a fire, explosion or release of a highly hazardous material and which has the potential to result in death or serious physical harm.</p>	<p>Non-substantive edit.</p>
c	<p>Process. Petroleum refinery activities including use, storage, manufacturing, handling, piping or on-site movement that involve a highly hazardous material. Utilities and process equipment shall be considered part of the process if in the event of a failure or malfunction they could potentially contribute to a major incident. For</p>	<p>Process. Petroleum refinery activities including use, storage, manufacturing, handling, piping or on-site movement that involve a highly hazardous material. Utilities and process equipment shall be considered part of the process if in the event of a failure or malfunction they could potentially contribute to a major incident. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are</p>	<p>This modification is necessary to clarify that partial or unplanned shutdowns in petroleum refineries are covered if they involve a highly hazardous material.</p>

subsection	Initial Proposed Text	Proposed Modifications	Justification
	<p>purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that an incident in one vessel could affect any other vessel, shall be considered a single process.</p>	<p>located such that an incident in one vessel could affect any other vessel, shall be considered a single process. <u>This definition includes processes under partial or unplanned shutdowns. This definition excludes ancillary administrative and support functions, including office buildings, labs, warehouses, maintenance shops, and change rooms.</u></p>	
c	<p>Process Equipment. Any equipment, piping, instrumentation, control, non-procedural safeguard or appurtenance related to a process.</p>	<p>Process Equipment. Any <u>Equipment, including pressure vessels, rotating equipment,</u> piping, instrumentation, <u>process control,</u> non-procedural safeguard or appurtenance, related to a process.</p>	<p>This is necessary to specify what constitutes process equipment. The definition covers all equipment in service and equipment that may be used in the future that could affect a process. Note: “non-procedural safeguard” was deleted in the Notice of Proposed Modifications and was clearly shown in strikethrough on the text but was inadvertently left out of the summary. The modification is necessary to specify what constitutes process equipment. The definition covers all equipment in service and equipment that may be used in the future that could affect a process.</p>
c	<p>Process Safety Culture. A combination of group values and behaviors that reflects whether</p>	<p>Process Safety Culture. A combination of group values and behaviors that reflects whether there is a collective commitment by leaders and individuals to</p>	<p>This is necessary to clarify the emphasis is on process safety over competing goals. Process safety culture is aligned with the prevention strategies</p>

subsection	Initial Proposed Text	Proposed Modifications	Justification
	there is a collective commitment by leaders and individuals to emphasize safety over competing goals, in order to ensure protection of people and the environment.	emphasize <u>process</u> safety over competing goals, in order to ensure protection of people and the environment.	outlined in the Governor's Task Force Report.
c	Recognized and Generally Accepted Good Engineering Practices (RAGAGEP). Engineering, operation or maintenance activities established in codes, standards, technical reports or recommended practices, and published by recognized and generally accepted organizations such as the American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), American Society of Mechanical Engineers (ASME), American Society	Recognized and Generally Accepted Good Engineering Practices (RAGAGEP). Engineering, operation or maintenance activities established in codes, standards, technical reports or recommended practices, and published by recognized and generally accepted organizations such as the American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), American Society of Mechanical Engineers (ASME), American Society of Testing and Materials (ASTM), National Fire Protection Association (NFPA), and Instrument Society of America (ISA). <u>RAGAGEP does not include standards, guidelines or practices</u>	The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. The definition for RAGAGEP includes a list of examples, but is not exclusive. The Cal/OSHA PSM Program can be more protective than the Federal program.

subsection	Initial Proposed Text	Proposed Modifications	Justification
	of Testing and Materials (ASTM), National Fire Protection Association (NFPA), and Instrument Society of America (ISA).	<u>developed for internal use by the employer.</u>	
c	Temporary Pipe Repair. A repair of an active or potential leak to hydrocarbon, chemical, or high energy utility pipe or equipment due to a damage mechanism or manufacturing flaw of the pressure boundary (pipe metallurgy). This includes flange or valve packing leaks that could result in a major incident.	Temporary Pipe <u>or Equipment</u> Repair. A <u>temporary</u> repair of an active or potential leak <u>from process piping or equipment.</u> to hydrocarbon, chemical, or high energy utility pipe or equipment due to a damage mechanism or manufacturing flaw of the pressure boundary (pipe metallurgy). This <u>definition includes active or potential leaks in utility piping or utility equipment that affect a process, and flange or valve packing leaks that could result in a major incident.</u>	The definition is necessary to clarify the types of repair to utility piping and equipment that affect a process and could result in a major incident.
d	Subsection (d)(3) The employer shall provide for employee participation, pursuant to subsection (q). The PSI shall be made available to all employees and employees of contractors. Information pertaining to the	Subsection (d)(3) The employer shall provide for employee participation, pursuant to subsection (q). The PSI shall be made available to all employees and <u>relevant PSI shall be made available to affected employees of contractors.</u> Information pertaining to the hazards of the process shall be effectively	The proposed modification is intended to give employers flexibility in providing relevant PSI to affected employees of contractors, whose duties at the refinery may be unique or limited in scope and duration. Because employees of contractors may not be part of the operation of the refinery, their need for PSI may differ from employees given the nature of their work at a refinery.

subsection	Initial Proposed Text	Proposed Modifications	Justification
	hazards of the process shall be effectively communicated to all affected employees.	communicated to all affected employees.	
d	Subsection (d)(6)(H) Safety instrumented systems, such as interlocks and detection and suppression systems; and,	Subsection (d)(6)(H) Safety instrumented systems, such as interlocks and detection and suppression systems; and,	This is necessary to clarify that information pertaining to process equipment should not be limited to safety instrumented systems, but include all safety systems.
d	Subsection (d)(7) The employer shall document that process equipment complies with RAGAGEP, where RAGAGEP has been established for that process equipment, or with other equally or more protective internal standards that ensure safe operation.	Subsection (d)(7) The employer shall document that process equipment complies with RAGAGEP, where RAGAGEP has been established for that process equipment, or with other equally or more protective internal practices <u>standards</u> that ensure safe operation.	The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP and to document process equipment compliance through the use of internal practices that ensure safe operation that are more protective than RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. This is necessary to ensure safe operation and establishes RAGAGEP as a baseline standard to measure process equipment compliance. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program.

subsection	Initial Proposed Text	Proposed Modifications	Justification
e	Subsection (e)(3)(B) Previous major incidents in the petroleum refinery and petrochemical industry sectors that are relevant to the process;	Subsection (e)(3)(B) Previous <u>publicly documented</u> major incidents in the petroleum refinery and petrochemical industry sectors that are relevant to the process;	This is necessary to clarify the types of information about major incidents that can be used in the Process Hazard Analysis (PHA). Outcomes of previous incidents and external events provide a historical record to inform current and future safety practices.
e	Subsection (e)(6) The employer shall conduct an HCA, pursuant to subsection (l), for all recommendations made by a PHA team for each scenario that identifies the potential for a major incident. The employer shall append the HCA report to the PHA report.	Subsection (e)(6) The employer shall conduct an HCA <u>in a timely manner</u> , pursuant to subsection (l), for all recommendations made by a PHA team for each scenario that identifies the potential for a major incident. The employer shall append the HCA report to the PHA report.	The modification allows the employer with flexibility to conduct an Hierarchy of Hazard Controls Analysis (HCA). It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA.
f	Subsection (f)(6)(D) Safety instrumented systems and their functions.	Subsection (f)(6)(D) Safety instrumented systems and their functions.	This is necessary to clarify that information pertaining to process equipment should not be limited to safety instrumented systems, but include all safety systems and their functions. Note: This revision was incorrectly referenced as subsection (f)(6)(D) in the Notice of Proposed Modification. The correct reference is subsection (f)(1)(D).

subsection	Initial Proposed Text	Proposed Modifications	Justification
g	Subsection (g)(1)(B) Each employee involved in the maintenance of a process, and each employee prior to working in a newly assigned process, shall be trained in an overview of the process and in the relevant Operating Procedures, pursuant to subsection (f).	Subsection (g)(1)(B) Each employee involved in the maintenance of a process, and each <u>maintenance</u> employee prior to working in a newly assigned process, shall be trained in an overview of the process and in the relevant <u>hazards and safe work practices, Operating Procedures,</u> pursuant to subsection (f)(6).	This is necessary to clarify that this subsection addresses maintenance employees, and although maintenance employees are not involved in operations, they need to comply with safe work practices.
h	Subsection (h)(2)(A) When selecting a contractor, the refinery employer shall obtain and evaluate information regarding the contractor's safety performance, including programs used to prevent employee injuries and illnesses.	Subsection (h)(2)(A) When selecting a contractor, the refinery employer shall obtain and evaluate information regarding the contractor's safety performance, including programs used to prevent employee injuries and illnesses, <u>and shall require that its contractors and any subcontractors use a skilled and trained workforce pursuant to Health and Safety Code Section 25536.7.</u>	The provision ensures that contractors and contractor employees are informed of the process safety hazards in the refinery and applicable safety procedures, including what actions to take in the event of an emergency. This requirement is necessary to ensure the safety performance of contractor employees, throughout the time the contractor is performing work at the refinery.
h	Subsection (h)(2)(B) The refinery employer shall inform the contractor, and shall require that the contractor has informed each of its employees, of the following:	Subsection (h)(2)(B) The refinery employer shall inform the contractor, and shall ensure <u>require</u> that the contractor has informed each of its employees, of the following:	Given the diversity of programs among refineries, contractor training that is customized for each refinery is necessary to ensure safety. The employer is responsible for ensuring the training is sufficient. This is necessary to ensure transparency and accountability.

subsection	Initial Proposed Text	Proposed Modifications	Justification
h	Subsection (h)(3)(A) The contractor shall ensure that all of its employees are effectively trained, pursuant to subsection (g) and Health and Safety Code Section 25536.7, in the work practices necessary to safely perform their jobs.	Subsection (h)(3)(A) The contractor shall ensure that <u>it meets the requirements of Health and Safety Code Section 25536.7, and that all of its employees are effectively trained, pursuant to subsection (g) and Health and Safety Code Section 25536.7, in the work practices necessary to safely perform their jobs, including:-</u>	The modification is necessary to clarify contractor responsibilities for effective employee training.
h	Subsection (h)(3)(B) The contractor shall ensure that all of its employees are instructed in the following:	(B) The contractor shall ensure that all of its employees are instructed in the following:-	Non-substantive edit. The modification is necessary to clarify lettering for subsections (h)(3)(B) through (h)(3)(D).
h		<u>Add subsection (h)(4) Nothing in this subsection shall preclude the employer from requiring a contractor or an employee of a contractor to whom information is made available under this section to enter into a confidentiality agreement prohibiting him or her from disclosing such information, as set forth in CCR Title 8, Section 5194(i).</u>	This is necessary to protect employers' proprietary and confidential information.

subsection	Initial Proposed Text	Proposed Modifications	Justification
i	Subsection (i)(1) The employer shall perform a Pre Start-Up Safety Review (PSSR) for new processes and for modified processes if the modification necessitates a change in the PSI, pursuant to subsection (d)	Subsection (i)(1) The employer shall perform a Pre Start-Up Safety Review (PSSR) for new processes and for modified processes if the modification necessitates a change in the PSI, pursuant to subsection (d) <u>and for partial or unplanned shutdowns</u>	This modification is necessary to clarify the types of shutdowns requiring PSSR's. Requiring a comprehensive PSSR is necessary to ensure safety during the start-up process. This is necessary to ensure that the employer carefully assesses the function, performance, and integrity of new or modified processes during a partial or unplanned shutdown.
i	Subsection (i)(2)(E) Training of each operating employee and maintenance employee has been completed.	Subsection (i)(2)(E) Training of each operating employee and maintenance employee <u>affected by the change</u> has been completed.	This is necessary to clarify which operating and maintenance employees receive training pursuant to the PSSR prior to the introduction of highly hazardous materials to a process. This limits the training to employees who are impacted by the change.
j	Subsection (j)(2)(B) The frequency of inspections and tests shall be consistent with the applicable manufacturer's recommendations, or RAGAGEP, or other equally or more protective internal standards. Inspections and tests shall be conducted more frequently if necessary, based on the operating experience with the process equipment.	Subsection (j)(2)(B) The frequency of inspections and tests shall be consistent with <u>(1) the applicable manufacturer's recommendations, or (2) RAGAGEP, or (3) other equally or more protective internal practices standards that are more protective than (1) or (2).</u> Inspections and tests shall be conducted more frequently if necessary, based on the operating experience with the process equipment.	The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program.

subsection	Initial Proposed Text	Proposed Modifications	Justification
j	Subsection (j)(3)(A) The employer shall correct deficiencies to ensure safe operation of process equipment. Repair methodologies shall be consistent with RAGAGEP or other equally or more protective internal standards.	Subsection (j)(3)(A) The employer shall correct deficiencies to ensure safe operation of process equipment. Repair methodologies shall be consistent with RAGAGEP or other <u>equally or more</u> protective internal standards <u>practices</u> .	The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. This is necessary to ensure safe operation and establishes RAGAGEP as a baseline standard to measure repair methodologies. This is necessary to ensure that equipment deficiencies are corrected properly, using practices that are RAGAGEP or are more protective than RAGAGEP. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program.
k	Subsection (k)(4) A DMR shall be reviewed as part of a major change on a process for which a damage mechanism exists, prior to approval of the change. If a major change will introduce a damage mechanism, a DMR shall be conducted, prior to approval of the change.	Subsection (k)(4) A DMR shall be reviewed as part of a major change on a process for which a damage mechanism exists, prior to approval of the change. If a major change may <u>will</u> introduce a damage mechanism, a DMR shall be conducted, prior to approval of the change.	The modification is necessary to allow the employer flexibility in determining when to conduct a Damage Mechanism Review (DMR) as part of a Major Change.

subsection	Initial Proposed Text	Proposed Modifications	Justification
1	Subsection (1)(2) The employer shall also conduct an HCA as follows:	Subsection (1) (2) The employer shall also conduct an HCA <u>in a timely manner</u> as follows:	The modification allows the employer with flexibility to conduct an HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA.
1	Subsection (1)(4)(D) The employer shall develop an effective review protocol to ensure that relevant, publically available information on inherent safety measures and safeguards is analyzed and documented by the team. This information shall include inherent safety measures and safeguards that have been: (1) achieved in practice by the petroleum refining industry and related industrial sectors; and (2) required or recommended for the petroleum refining industry and related industrial sectors, by a federal or state agency, or local California agency,	Subsection (1)(4)(D) <u>Identify, analyze, and document</u> The employer shall develop an effective review protocol to ensure that relevant, publically available information on inherent safety measures and safeguards, is analyzed and documented by the team. This information shall include inherent safety measures and safeguards that have been: (1) achieved in practice by the petroleum refining industry and related industrial sectors; and (2) required or recommended for the petroleum refining industry and related industrial sectors, by a federal or state agency, or local California agency, in a regulation or report.	The modification allows the employer with flexibility to determine which publically available information on inherent safety measures and safeguards will be utilized as part of the HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA.

subsection	Initial Proposed Text	Proposed Modifications	Justification
	in a regulation or report.		
n	Subsection (n)(1) The employer shall develop, implement and maintain effective written MOC procedures to manage changes (except for replacements-in-kind) in process chemicals, technology, procedures, process equipment or facilities. The MOC procedure shall include provisions for temporary repairs, including temporary pipe repairs.	Subsection (n)(1) The employer shall develop, implement and maintain effective written MOC procedures to manage changes (except for replacements-in-kind) in process chemicals, technology, procedures, process equipment and facilities. The MOC procedure shall include provisions for temporary repairs, including temporary pipe repairs.	Non-substantive edit.
n	Subsection (n)(2)(C) Modifications to operating procedures;	Subsection (n)(2)(C) Modifications to operating <u>and</u> <u>maintenance</u> procedures or development of new <u>operating and maintenance</u> procedures;	This modification is necessary to clarify when Management of Change (MOC) procedures are required in the development of new and modified operating and maintenance procedures.
n	Subsection (n)(6) Employees involved in the process, as well as maintenance workers whose job tasks will be affected by a change, shall be informed of, and effectively trained	Subsection (n)(6) Employees involved in the process, as well as maintenance workers whose job tasks will be affected by a change, shall be informed of, and effectively trained in, the change in a timely manner, prior to implementation of the	This is necessary to give the employer flexibility in how they make documentation available.

subsection	Initial Proposed Text	Proposed Modifications	Justification
	<p>in, the change in a timely manner, prior to implementation of the change. The employer shall make the MOC documentation available to, and require effective training for, contractors and employees of contractors. For contractors and employees of contractors who are operating the process and whose job tasks will be affected by a change, the employer shall inform and require effective training in the change in a timely manner, prior to implementation of the change, pursuant to subsection (h).</p>	<p>change. The employer shall make the MOC documentation available to, and require effective training for, contractors and employees of contractors. For contractors and employees of contractors who are operating the process and whose job tasks will be affected by a change, the employer shall <u>make the MOC documentation available to inform</u> and require effective training in the change in a timely manner, prior to implementation of the change, pursuant to subsection (h).</p>	
o	<p>Subsection (o)(5) The Incident Investigation Team shall implement the employer's Root Cause Analysis method to determine the initiating causes of the incident. The analysis shall</p>	<p>Subsection (o)(5) The Incident Investigation Team shall implement the employer's Root Cause Analysis method to determine the initiating <u>and underlying</u> causes of the incident. The analysis shall include an <u>assessment/identification</u> of management system</p>	<p>The modification is necessary to focus the Root Cause Analysis (RCA) on initiating and underlying causes of incidents and identification of management system failures. The Governor's Interagency Refinery Task force report recommended statewide changes to require an RCA to</p>

subsection	Initial Proposed Text	Proposed Modifications	Justification
	include an assessment of management system failures, including organizational and safety culture deficiencies.	failures, including organizational and safety culture deficiencies.	be part of an incident investigation.
o	<p>Subsection (o)(11) Investigation reports shall be provided to and upon request, reviewed with employees whose job tasks are affected by the incident.</p> <p>Investigation reports shall also be made available to all operating, maintenance and other personnel, including employees of contractors where applicable, whose work assignments are within the facility where the incident occurred or whose job tasks are relevant to the incident findings.</p> <p>Investigation reports shall be provided to employee representatives and,</p>	<p>Subsection (o)(11) Investigation reports shall be provided to and upon request, reviewed with employees whose job tasks are affected by the incident. Investigation reports shall also be made available to all operating, maintenance and other personnel, including employees of contractors where applicable, whose work assignments are within the facility where the incident occurred or whose job tasks are relevant to the incident findings. Investigation reports shall be provided <u>on request</u> to employee representatives and, where applicable, contractor employee representatives.</p>	<p>This modification is necessary to clarify the conditions under which the employer must provide investigation reports to employee representatives.</p>

subsection	Initial Proposed Text	Proposed Modifications	Justification
	where applicable, contractor employee representatives.		
q	Subsection (q)(1)(A) Effective participation by affected operating and maintenance employees and employee representatives, at the earliest possible point, in performing PHAs, DMRs, HCAs, MOCs, Management of Organizational Change (MOOCs), Process Safety Culture Assessment (PSCAs), Incident Investigations, SPAs and PSSRs;	Subsection (q)(1)(A) Effective participation by affected operating and maintenance employees and employee representatives, <u>throughout all phases, at the earliest possible point,</u> in performing PHAs, DMRs, HCAs, MOCs, Management of Organizational Change (MOOCs), Process Safety Culture Assessment (PSCAs), Incident Investigations, SPAs and PSSRs;	The modification ensures meaningful participation and decision making for affected operating and maintenance employees and employee representatives in all program teams for all analyses required in the subsection. The mandate for participation is outlined in the Governor's Task Force report.
q	Subsection (q)(1)(B) Effective participation by affected operating and maintenance employees and employee representatives, at the earliest possible point, in the development, training, implementation and maintenance of the PSM elements	Subsection (q)(1)(B) Effective participation by affected operating and maintenance employees and employee representatives, <u>throughout all phases, at the earliest possible point,</u> in the development, training, implementation and maintenance of the PSM elements required by this section; and,	The modification ensures meaningful participation and decision making for affected operating and maintenance employees and employee representatives in all program teams for all analyses required in the section. The mandate for participation is outlined in the Governor's Task Force report.

subsection	Initial Proposed Text	Proposed Modifications	Justification
	required by this section; and,		
q	Subsection (q)(2) Authorized collective bargaining agents may select (i) representative(s) to participate in overall PSM program development and implementation planning and (ii) employee(s) to participate in PSM teams and other activities, pursuant to this section.	Subsection (q)(2) Authorized collective bargaining agents may select (i) employee representative(s) to participate in overall PSM program development and implementation planning and (ii) employee(s) to participate in PSM teams and other activities, pursuant to this section.	This is necessary to clarify that participation in the overall PSM program development and implementation planning is from employees and not from representatives who may or may not be employees of the refinery.
q	Subsection (q)(5) Within ninety (90) calendar days of the effective date of this section, the employer shall develop, in consultation with employee and employee representatives, a system to implement the following:	Subsection (q)(5) Within ninety (90) calendar days of the effective date of this section, the employer shall develop, in consultation with employee and employee representatives, <u>shall develop and a system to</u> implement the following:	The timeline provides the employer with a flexible period of time to respond to written hazard reports. As outlined in the Governor's Task Force Report, the employer shall address and correct hazards that present the potential for death or serious physical harm, by eliminating or minimizing the hazard.
q	Subsection (q)(5)(B) Effective procedures to ensure the right of all employees, including employees of contractors, to anonymously report hazards. The	Subsection (q)(5)(B) Effective procedures to ensure the right of all employees, including employees of contractors, to anonymously report hazards. The employer shall respond in writing within thirty (30) calendar days to written hazard	The timeline provides the employer with a flexible period of time to respond to written hazard reports. As outlined in the Governor's Task Force Report, the employer shall address and correct hazards that present the potential for death or serious

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	<p>employer shall respond in writing within thirty (30) calendar days to written hazard reports submitted by employees, employee representatives, contractors, employees of contractors and contractor employee representatives. The employer shall prioritize and promptly respond to reports of hazards that present the potential for death or serious physical harm.</p>	<p>reports submitted by employees, employee representatives, contractors, employees of contractors and contractor employee representatives. The employer shall prioritize and promptly respond to <u>and correct</u> reports of hazards that present the potential for death or serious physical harm.</p>	<p>physical harm, by eliminating or minimizing the hazard.</p>
r	<p>Subsection (r)(2) The employer shall conduct an effective PSCA and produce a written report within eighteen (18) months following the effective date of this section, and at least every five (5) years thereafter.</p>	<p>Subsection (r)(2) The employer shall conduct an effective PSCA and produce a written report within eighteen (18) months following the effective date of this section, and at least every five (5) years thereafter. <u>If the employer has conducted and documented a PSCA up to eighteen (18) months prior to the effective date of this section, and that PSCA includes the elements identified in this subsection, that PSCA may be used to satisfy the employer's obligation to</u></p>	<p>This grandfathering provision gives the employer flexibility to use previously conducted PSCA that meet the requirements of this proposal. Refineries that currently conduct PSCAs should receive credit for being proactive.</p>

subsection	Initial Proposed Text	Proposed Modifications	Justification
		<u>complete an initial PSCA under this subsection.</u>	
r	Subsection (r)(6) The employer, in consultation with the PSCA team, shall prioritize recommendations that will be implemented within 24 months of completion of the written report.	Subsection (r)(6) The employer, in consultation with the PSCA team, shall prioritize recommendations <u>and implement corrective actions</u> that will be implemented within 24 months of completion of the written report.	This is necessary to clarify that the implementation requirements include corrective actions.
r	Subsection (r)(7) The PSCA team shall conduct a written Interim Assessment of the implementation and effectiveness of each PSCA corrective action within three (3) years following the completion of a PSCA report. If a corrective action is found to be ineffective, the employer shall implement changes necessary to ensure effectiveness.	Subsection (r)(7) The PSCA team shall conduct a written Interim Assessment of the implementation and effectiveness of each PSCA corrective action within three (3) years following the completion of a PSCA report. If a corrective action is found to be ineffective, the employer shall implement changes necessary to ensure effectiveness <u>in a timely manner not to exceed six months.</u>	The modification gives the employer flexibility to address corrective actions within the provided timeframe. If the corrective actions are ineffective they should be addressed as soon as reasonably possible, within 6 months.
r	Subsection (r)(9) PSCA reports, corrective action plans and Interim Assessments shall be communicated and made available to employees, their	Subsection (r)(9) PSCA reports, corrective action plans and Interim Assessments shall be communicated and made available to employees, their representatives and participating contractors	This is necessary to allow greater flexibility for employers to communicate and make available PSCA reports, corrective action plans, and Interim Assessments to employees, their representatives, and

subsection	Initial Proposed Text	Proposed Modifications	Justification
	representatives and participating contractors within thirty (30) calendar days of completion.	within <u>sixty (60)</u> calendar days of completion.	participating contractors. This ensures transparency and accountability.
s	Subsection (s)(6) The employer shall include an assessment of Human Factors in new operating and maintenance procedures.	Subsection (s)(6) The employer shall include an assessment of Human Factors in new <u>and revised</u> operating and maintenance procedures.	This is necessary to ensure the employer includes a Human Factors Assessment into revised operating and maintenance procedures. Effective procedures are necessary for both employee and process safety.
t	Subsection (t)(2) The employer shall designate a team to conduct a MOOC assessment prior to reducing staffing levels, reducing classification levels of employees, or changing shift duration or employee responsibilities. The employer shall provide for employee participation pursuant to subsection (q). The MOOC assessment is required for changes with a duration exceeding 90 calendar days affecting operations, engineering, maintenance,	Subsection (t)(2) The employer shall designate a team to conduct a MOOC assessment prior to reducing staffing levels, reducing classification levels of employees, or changing shift duration, <u>or increasing</u> employee responsibilities <u>at or above 15%</u> . The employer shall provide for employee participation pursuant to subsection (q). The MOOC assessment is required for changes with a duration exceeding 90 calendar days affecting operations, engineering, maintenance, health and safety, or emergency response. This requirement shall also apply to employers using employees of contractors in permanent positions.	The modification is necessary to clarify and quantify the level at which changes in employee responsibilities trigger a MOOC assessment. The 15% threshold is a recognized industry standard and is used here to provide consistency.

subsection	Initial Proposed Text	Proposed Modifications	Justification
	health and safety, or emergency response. This requirement shall also apply to employers using employees of contractors in permanent positions.		
t	Subsection (t)(5) The refinery manager or designee shall certify that the MOOC assessment is accurate and that the proposed organizational change meets the requirements of this subsection.	Subsection (t)(5) The refinery manager or designee shall certify <u>based on information and belief formed after reasonable inquiry</u> that the MOOC assessment is accurate and that the proposed organizational change meets the requirements of this subsection.	This is necessary to provide a standard by which a refinery manager or their designee is required to certify the MOOC assessment. The modification is necessary to ensure accountability and transparency.
v	Subsection (v)(1) The refinery manager shall be responsible for compliance with this section.	Subsection (v)(1) The <u>employer shall designate the refinery manager as the person with authority and responsibility</u> shall be responsible for compliance with this section.	The modification is necessary to clarify that the employer is required to designate the refinery manager as the person with authority and responsibility for all aspects of PSM, which ensures accountability and transparency.
x	Subsection (x)(6) Each recommendation that is changed or rejected by the employer shall be made available to team members for comment. The employer shall document all comments received	Subsection (x)(6) Each recommendation that is changed or rejected by the employer shall be <u>communicated to onsite</u> made available to team members for comment <u>and made available to offsite team members for comment</u> . The employer shall document all <u>written</u> comments received from	The proposed modification is intended to give employers flexibility in communicating changes to recommendations. This ensures that each team member is aware of, and able to comment on, any recommendation that the employer has elected to change or reject. This ensures transparency and

subsection	Initial Proposed Text	Proposed Modifications	Justification
	from team members for each changed or rejected recommendation. The employer shall document a final decision for each recommendation and shall make it available to team members.	team members for each changed or rejected recommendation. The employer shall document a final decision for each recommendation and shall <u>communicate it to onsite team members and make it available to offsite</u> team members.	accountability in addressing team recommendations.
x	Subsection (x)(11) Each corrective action from a Compliance Audit shall be completed within eighteen (18) months after completion of the audit, unless the employer demonstrates in writing that it is infeasible to do so. Each corrective action from an incident investigation shall be completed within eighteen (18) months after completion of the investigation.	Subsection (x)(11) Each corrective action from a Compliance Audit shall be completed within eighteen (18) months after completion of the audit, unless the employer demonstrates in writing that it is infeasible to do so. Each corrective action from an incident investigation shall be completed within eighteen (18) months after completion of the investigation, <u>unless the employer demonstrates in writing that it is infeasible to do so.</u>	This is necessary to allow the employer limited flexibility to demonstrate in writing the circumstances and rationale that make it infeasible to meet the prescribed time limits for completion of corrective actions resulting from an incident investigation.

Summary and Response to Written and Oral Comments Resulting from the 45-Day Public Comment Period (July 15, 2016 – September 15, 2016):

The Board incorporates into each and every response set forth below the following: the Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.

The Board received approximately 4,844 identical form email letters/comments from a server named “Know Who Services.” The letters expressed general support for the proposal and referenced the comments from USW, BlueGreen Alliance, California Labor Federation, and Communities for a Better Environment. The Board acknowledges the comments collectively and refers to the Board’s responses to USW, BlueGreen Alliance, California Labor Federation, and Communities for a Better Environment.

Summary and Response to Written Comments Resulting from the 45-Day Public Comment Period

	Commenter	Comment	PSM Response
a. Scope and Purpose			
	WSPA	Suggested the scope and purpose be changed to the following: These regulations contain requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals (highly hazardous materials [HHM]). The establishment of a process safety management regulation is intended to eliminate to the extent feasible, the risks to which personnel are exposed in petroleum refineries.	The regulations are intended to cover all processes within petroleum refineries to reduce the risk of major incidents and eliminate or minimize process safety hazards to which employees may be exposed.
	LABOR ¹	Restore Sept 2015 text.	The intent of the regulations is to establish a performance-based approach to reduce the risk of major incidents and protect employee safety and health. Employers are required to mitigate risks to employees by eliminating or minimizing process safety hazards.

¹ The following submitted the same comments and are collectively referred to as “LABOR” throughout the responses in the document: Blue Green Alliance/ CA Labor Federation/ United Steelworks /CHANGE /NRDC/ Greenpeace/ Chevron Richmond Blending & Shipping/ 4 Titian / Gerald Poje, PhD. / Jim Payne /CWA/ COSH/CSI/PSR/ Sierra Club/ Work Safe/ Melvin Willis / Randy Barisof / Tracy Scott / Marwin Reyes / NJ Work Environment Council / Mossville Environmental Action Now / Society for Occupational and Environmental Health / Center for Health, Environment & Justice / CT Coalition for Environmental and Economic Justice / Alaska Community Action on Toxics / Moms Clean Air Force – California / Women’s Voices for the Earth / Coming Clean / Dr. Whyte Pediatrics / Nontoxic Certified / Union of Concerned Scientists /Californians for a Healthy and Green Economy

Commenter	Comment	PSM Response
		Therefore, the Board declines to modify the proposal further in response to this comment.
CICC	Concern with extending scope beyond refineries	Per the scope and application, this regulation is limited to processes within petroleum refineries, NAICS 324110.
CSB	The major goal of accident prevention has been diminished to a partial and undefined goal of reducing risks. As the CSB has emphasized in recent oil refinery accident reports, good practice process safety guidance provides that the goal of PSM is to prevent incidents through targeted risk reduction to a low level such as “the greatest extent feasible.” The prevention of accidents is a higher-level goal than reducing the risk of accidents, and is the underlying foundation of this proposed regulation. As such, the CSB suggests this more preventive language: “This Section contains requirements for petroleum refineries to reduce risks by preventing major incidents and applying a hierarchical approach to eliminate and control process safety hazards to which employees may be exposed.”	The scope is sufficient as written, which includes complete elimination of a hazard, and therefore the related risk. Prioritizing the elimination of hazards is included in the HCA subsection (I).
b. Application		
WSPA	Suggested change to apply to specific threshold quantities based on Appendix A.	The appendix is not inclusive of all chemicals that relate to a process or unit, and in order to achieve the safety level desired and meet the requirements outlined in the Governor's Task Force report, the regulation needs to apply to all processes, as defined.

Commenter	Comment	PSM Response
LABOR	Insert clarifying text “including processes under partial or complete turnaround.”	The Board acknowledges this comment. In response, the Board modified the definition of "Process" to specify what does and does not constitute a process and to clarify that partial or unplanned shutdowns in petroleum refineries are covered if they involve a highly hazardous material.
c. Definitions		
Chevron	Concern with the term “effective” and lack of definition.	"Effective" is a term identified by DOSH as useful for enforcement purposes. Because this is a performance standard, the employer has flexibility in how they meet the requirements based on the unique needs of each facility. The term enables DOSH to evaluate and enforce the compliance of each facility based on the performance standard. The employer is given flexibility to evaluate and implement the most protective approaches to preventing or mitigating process safety hazards. More effective documentation, employee participation ensures accountability and transparency in support of safer operations.
CSB	“major change” and “major incident” language: need to restore specificity to language involving safety performance indicators	Requirements to track and document process safety performance indicators are located in subsection (v)(4) Process Safety Management Program. Regarding "Major Change", the Board modified the definition to specify what constitutes a major change. As a performance based regulation, the employer is given flexibility

	Commenter	Comment	PSM Response
			<p>to evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definition can impact existing processes and must be evaluated to ensure safe operation. Regarding "Major Incident", the definition specifies what constitutes a major incident. As a performance based regulation, the employer is given flexibility to evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definitions can impact existing processes and must be evaluated to ensure safe operation. The definitions clarify terms to assist employers in understanding the intent and requirements of the regulation.</p>
	CSB	Address loophole created by revision of "Turnaround" language	<p>The Board acknowledges this comment. The proposal and "turnaround" language are consistent with Labor Code section 7872. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Chevron /Valero	C. Definitions of Key Terms Dramatically Expanding the Scope of Requirements - "major incident" and "major change". Include the following: 1. Introduction of a new process, new process equipment, or new highly hazardous material; 2. Any change in safe operating limits; or, 3. Any alteration in a process, in process equipment or in process chemistry that introduces a new process safety hazard or worsens an existing process safety hazard.	The definitions specify what constitutes a major incident, major change and highly hazardous materials. As a performance based regulation, the employer is given flexibility to evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definitions can impact existing processes and must be evaluated to ensure safe operation. The definitions clarify terms to assist employers in understanding the intent and requirements of the regulation.
WSPA	Employee Representative. A union representative, where a union exists, or an employee- designated representative in the absence of a union <u>that is onsite and qualified for the task</u> . The term is to be construed broadly, and may include the local union, the international union, or a refinery or contract employee designated by these parties, such as the safety and health committee representative at the site.	The Board acknowledges the comments. In response, the Board modified the proposal to clarify the definition. Employees are entitled to select representatives of their choosing where a union exists. In the absence of a union, employee-designated representatives must be onsite and qualified for the task. Employees and employee representatives must meet the qualifications provided for under the various subsections of the proposal. The proposed modification does not limit an employer's rights and remedies to protect trade secrets.
Chevron	Employee representative - limit to employees, not contractors	
Tesoro	Definition of employee representative -- "...or representatives onsite and qualified for the task"	
Torrance	Definition of "employee representative" too broad	

Commenter	Comment	PSM Response
LABOR	Remove ambiguous text so the definition of Feasible reads, “Capable of being accomplished.”	This definition establishes the standard for the development and implementation of process safety recommendations. This definition is necessary to clarify the requirements for assessing and addressing process safety hazards and the factors that may be considered. The definition is referenced from California Public Resources Code Section 21061.1(CEQA). Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	There is no definition for Hierarchy of Hazard Controls in the regulation.	In response to this comment, the Board has modified the proposal to include a definition for Hierarchy of Hazard Controls.
Kern Oil & Refining	Definitions: Hierarchy of Hazards Control Analysis-The term “Hierarchy of Hazards Control Analysis” (HCA) is not defined.	
LABOR	Restore Sept. 2015 text to add to the Highly Hazardous Material definition, “This definition includes water when it is used as part of a process, or when it could affect a process, and it includes steam and asphyxiants, such as nitrogen and carbon dioxide.”	Water is covered under the definition for "utility" where the substance is included and used as part of a process; the potential for any impact due to interconnected vessels, as defined by the term Process, are covered. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
Chevron	The definition for highly hazardous material is unclear.	The definitions specify what constitutes a highly hazardous materials. As a performance based regulation, the employer is given flexibility to evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definitions can impact existing processes and must be evaluated to ensure safe operation. The definitions clarify terms to assist employers in understanding the intent and requirements of the regulation.
WSPA	The definition of major change is overly broad. WSPA proposes suggested language to narrow the definition.	The Board acknowledges this comment. In response, the Board modified the definition to specify what constitutes a major change. As a performance based regulation, the employer is given flexibility to evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definition can impact existing processes and must be evaluated to ensure safe operation.
LABOR	Restore Sept. 2015 text for the definition of Major Change by removing the words, "change in."	
Chevron	The definition of major change is overly broad and triggers numerous time consuming and costly activities.	
Tesoro	Major change -- limit criteria; remove process equipment from the definition	
Torrance	Definition of major change -- too broadly defined	
WSPA	The definition of major incident is overly broad. WSPA proposes use of the term and adding a definition for "catastrophic release".	
Chevron	The definition of major incident is overly broad and should be limited to incidents that result in actual harm.	
Torrance	Definition of major incident -- too broadly worded	The suggested definitions submitted were too narrowly defined; not every release is catastrophic but some have the potential to be, and, therefore need to be reviewed. In addition, several comments were not applicable to the PSM proposal. The definitions specify what constitutes a major incident. As a performance based regulation, the employer is given flexibility to evaluate and implement the

Commenter	Comment	PSM Response
		most effective approaches to preventing or mitigating process safety hazards. The criteria listed in the definitions can impact existing processes and must be evaluated to ensure safe operation. The definitions clarify terms to assist employers in understanding the intent and requirements of the regulation.
WSPA	Suggested language to include pressure vessels and rotating equipment and omit non-procedural safeguards.	The Board acknowledges this comment. In response, the Board modified the definition to specify what constitutes process equipment. The definition covers all equipment in service and equipment that may be used in the future that could affect a process.
Tesoro	Definition of process equipment should be narrowed to "equipment including..." to limit the definition	
WSPA	Suggested language to exclude ancillary and administrative support functions.	The Board acknowledges this comment. In response, the Board modified the definition to specify what does and does not constitute a process and to clarify that partial or unplanned shutdowns in petroleum refineries are covered if they involve a highly hazardous material. The definition clarifies the extent to which other vessels have the potential to affect a process.
Chevron /Valero	The definition is overly broad and commenter suggests use of appendix of chemicals and threshold quantities.	
Tesoro	Definition of process -- needs to be clarified due to the term "interconnectedness"	
Torrance	Definition of "process" is too broad	
WSPA	Need to qualify definition to indicate it applies only to process safety.	The Board acknowledges this comment. In response, the Board modified the definition to clarify the emphasis is on process safety over competing goals. Process safety culture is aligned with the prevention strategies outlined in the Governor's Task Force Report.
Chevron	Process safety culture - need to qualify definition to indicate it applies only to process safety	

Commenter	Comment	PSM Response
WSPA	The definition is overly broad.	The definition is intended to clarify terms to assist employers in understanding the intent and requirements of the regulation. Addressing potential hazards enables the identification of hazards proactively, allowing elimination or reduction of the risk of their occurrence.
Chevron	Process safety hazard - includes a hazard that has the "potential" to cause... impossible to apply as a practicable matter. Suggest "imminent" and actual.	
WSPA	RAGAGEP. The impacts of the proposed requirements under RAGAGEP were not included in the RAND Report.	RAND Economic Analysis includes industry costs for all new requirements, many of which include RAGAGEP provisions, as listed on pages 16-17 of http://www.rand.org/content/dam/rand/pubs/research_reports/R1400/RR1421/RAND_RR1421.pdf Industry is currently required to comply with RAGAGEP under Section 5189(d)(3)(B). (https://www.dir.ca.gov/title8/5189.html)
LABOR	Restore Sept 2015 text to RAGAGEP to add the American Institute of Chemical Engineers (AIChE)/Center for Chemical Process Safety (CCPS)	The Board acknowledges this comment. In response, the Board modified the definition to clarify what is and is not included as a RAGAGEP. The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. The definition for RAGAGEP includes a list of examples, but is not exclusive. The Cal/OSHA PSM Program
LABOR	Restore the last sentence in the RAGAGEP definition, "RAGAGEP does not include standards, guidelines or practices developed for internal use by the employer."	
Chevron	Definition of RAGAGEP is too prescriptive.	
Torrance	Definition of "RAGAGEP" and Utility do not match counterparts in CalARP	
UCLA	Include AIChE in the definition of RAGAGEP	

Commenter	Comment	PSM Response
		can be more protective than the Federal program.
WSPA	Suggested correction of minor error in the definition.	The Board acknowledges this comment. In response, the Board modified the definition to clarify the types of repair to utility piping and equipment that can affect a process and could result in a major incident.
LABOR	Restore Sept 2015 text to the definition of Temporary Pipe Repair by deleting “high energy.”	
Chevron	Concern with the definition of turnaround and its implications for the PHA requirements.	The Board acknowledges this comment. Nothing in the proposal precludes employers from completing corrective actions in advance of the timelines provided in the regulation. The proposal requires that process safety hazards be promptly corrected. The proposal is consistent with Labor Code section 7872. Therefore, the Board declines to modify the proposal further in response to this comment.
LABOR	Amend text of definition for Utility to allow PSM coverage of steam and asphyxiants when used outside of a process	PSM only covers the process or anything that can affect the process. Therefore, the Board declines to modify the proposal further in response to this comment.
Kern Oil & Refining	The term “Root Cause Analysis” should have a definition.	The Board acknowledges the comment. The term is generally known throughout the industry as a component of an incident investigation. Therefore, the Board declines to modify the proposal further in response to this comment.
d. Process Safety Information		

Commenter	Comment	PSM Response
Chevron	<p>Concern that several of the proposal elements will severely impact safety. Requirements impose significant administrative burdens. Concerns about the extent of employee participation regarding development and maintenance of PSI.</p>	<p>The requirements provide employers with a standard for PSI development and maintenance and ensure the PSI has the information necessary to be useful. Employee participation, as defined, is valuable to ensure those with experience and who are closest to the process (front line workers) are able to provide input given their proximity to and familiarity with each process. The PSI is the foundation for the PSM program and therefore all viewpoints are important and should be considered. Confidentiality agreements are provided for in subsection (q)(4) to address trade secret concerns.</p>
CNA	<p>Removing language from the Process Safety Information section which would have required the refinery to report the number of leak seal repairs it applies on piping systems, along with the length of time those temporary repairs are left in place. Allowing refineries to obscure or omit this important process safety indicator significantly reduces the potential for accountability. Supports Blue Green Alliance</p>	<p>The Board acknowledges this comment. Leak Seal Repairs are found in MOC, including temporary repairs and temporary pipe repairs in subsection (n)(1). Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Torrance	<p>PSI -- better to not give it to employees at all, versus slightly delayed</p>	<p>The requirements provide employers with a standard for PSI development and maintenance and ensure the PSI has the information necessary to be useful. Employee participation, as defined, is valuable to ensure those with experience and who are closest to the process (front line workers) are able to provide</p>

Commenter	Comment	PSM Response
		input given their proximity to and familiarity with each process. The PSI is the foundation for the PSM program and therefore all viewpoints are important and should be considered. Confidentiality agreements are provided for in subsection (q)(4) to address trade secret concerns.
WSPA	Suggested change: The employer shall provide for employee participation, pursuant to subsection (q). <u>Relevant</u> The PSI shall be made available to all employees and employees of contractors. Information pertaining to the hazards of the process shall be effectively communicated to all affected employees.	In response to this comment, the Board modified the proposal to give employers flexibility in providing relevant PSI to affected employees of contractors, whose duties at the refinery may be unique or limited in scope and duration.
LABOR	At (3) restore Sept 2015 text, "...in developing and compiling the PSI...";	Subsection (q) requires employee participation in all aspects of the PSM program which includes the development and maintenance of PSI as required in subsection (d)(1). Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	The proposed standard leaves the date for processes unchanged from the existing rule.	9/1/1992 is the date the PSM Section 5189 regulations went into effect. From that date on, all information pertaining to material and energy balances for processes were required to be retained. This information is still relevant and is important to retain for current PSI and to consider in the analyses required by the proposed regulation. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
LABOR	At (7), remove “or with other equally or more protective internal standards that ensure safe operation.”	The Board acknowledges this comment. In response, the Board modified the definition to clarify what is and is not included as a RAGAGEP.
e. Process Hazard Analysis		
Chevron	The term “previous major incidents” is vague.	The Board acknowledges the comment. In response, the Board modified the proposal to clarify that only major incidents that are publicly documented and relevant to the process are required to be addressed by the PHA. This ensures accuracy and integrity of the information used in the PHA. Access to this salient information is necessary to address the hazards and potential consequences using the best information available. This promotes safe operation and minimizes or eliminates process safety hazards. Outcomes of previous incidents and external events provide a historical record to inform current and future safety practices.
WSPA	Suggested language to limit to “publicly documented” incidents and remove the term “petrochemical”.	
Catherine Luciano	Shelter in Place Program; aftermath of an earthquake that may fracture the MHF tank or the pipes at the refinery that transport it and release MFH?	The Board acknowledges the comment. The regulation is intended to promote worker and community safety through the elimination or reduction of process safety hazards. Hazards presented by modified hydrofluoric acid tanks or pipes, along with other foreseeable hazards, are covered by the PHA for earthquake scenarios and other high risk events. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
LABOR	At (4), add, "...in the performance of all PHAs..."	Subsection (q) requires employee participation in all aspects of the PSM program which includes the performance of PHAs as required in subsection (d)(1). Therefore, the Board declines to modify the proposal further in response to this comment.
Chevron	Suggest employers should have the ability to use qualitative methods for SPAs.	The proposal allows the employer flexibility in selecting the risk assessment method for the facility. Layer of Protection Analysis (LOPA) is provided as an example of an effective method to identify the most protective safeguards. Qualitative analysis lacks specificity and is too subjective to be an adequate method for assessing levels of risk for an SPA. Quantitative and semi-quantitative analysis provides a comprehensive, objective and standardized assessment allowing comparison of risk levels. Therefore, the Board declines to modify the proposal further in response to this comment.
Chevron /Valero	Suggest employers should have the ability to use qualitative methods for SPAs.	
WSPA	The requirements of the PHA are overly prescriptive. The PHA should allow for qualitative analysis.	
Tesoro	PHA should allow for qualitative analysis	
Chevron	Concern about the timing of the PHA and SPA analysis completion.	The SPA may be performed as part of the PHA or as a stand-alone analysis. The PHA is considered complete only when the SPA analysis confirms that the recommendations in the PHA are adequate. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
LABOR	At (6) restore Sept 2015 text, pertaining to the six month timeline for completion of the HCA.	The Board acknowledges the comment. In response, the Board modified the language to read as follows: (e)(6) The employer shall conduct an HCA <i>in a timely manner</i> pursuant to subsection (l)..." All timelines for completion (employer's responsibility) are governed by subsection (x). The current PHA 5189 also requires completion "in a timely manner" to allow for the variation in complexity of analyses required. The modification allows the employer to have flexibility to conduct an HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA.
f. Operating Procedures		
Torrance	Operating procedures: emergency responders need to be able to act	The operating procedures are for operators responding to a process incident. Emergency responders have their own set of emergency procedures and duties, unrelated to this proposed regulation. Nothing in the proposed regulation precludes emergency responders from doing any aspect of their duties. Therefore, the Board declines to modify the proposal further in response to this comment.
UCLA	Should eliminate hazards through fail safe systems and not rely on operating procedures	The Board acknowledges this comment. The suggestion is achieved through the requirements of the HCA. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
WSPA	The emergency procedure requirements detailed in operating procedures are overly prescriptive and overly broad and preclude emergency responders from taking action.	For operators or refinery employees, if no emergency procedures are in place to address unanticipated operating conditions, the refinery must shut down or isolate the process to ensure the safety of the workers and surrounding community. The employer also has flexibility to provide a level of protection that is functionally equivalent to, or safer than, shutting down or isolating the process. Therefore, the Board declines to modify the proposal further in response to this comment.
Torrance	The operating procedures are overly prescriptive and may adversely impact safety.	
Chevron	Operating procedures are prescriptive and overly broad.	Emergency procedures are necessary to address potential emergency scenarios. Known risks can be proactively assessed and protocol for addressing these instances can help empower employees with appropriate instructions should an emergency occur. Refineries have successfully developed emergency operating procedures. Therefore, the Board declines to modify the proposal further in response to this comment.
LABOR	At (5)(A), strike the sentence pertaining to defining "conditions for handling leaks, spills or discharges..."	There are instances in which equal or greater safety can be maintained by means other than shutting down the process. The proposal allows for this. Therefore, the Board declines to modify the proposal further in response to this comment.
g. Training		

Commenter	Comment	PSM Response
WSPA	Suggested the following changes: (g)(1)(B) Each employee involved in the maintenance of a process, and each <u>maintenance</u> employee prior to working in a newly assigned process, shall be trained in an overview of the process and its hazards and in the relevant <u>maintenance</u> Operating Procedures, as pursuant to subsection (f).	The Board acknowledges the comment. In response, the Board modified the proposal to clarify that this subsection addressed maintenance employees, and although maintenance employees are not involved in operations, they need to comply with safe work practices.
Chevron	Concerns about training requirements for maintenance employees. Given existing safety standards, the training requirements are unnecessary.	
h. Contractors		
Chevron	Concerns about overly broad application of “supply services” and protection of employer’s proprietary information to contractors.	The Board acknowledges the comment. In response, the Board modified the proposal to add subsection (h)(4) to protect employers' proprietary and confidential information. Contractors who are providing incidental services that do not affect process safety are not subject to the requirements. If a contractor's work may affect the process, they must comply with the requirements of subsection (h).
LABOR	At (2)(B), insert “effectively.”	The Board acknowledges the comment. In response, the Board modified subsection (h)(2)(B) to promote safety and accountability. Therefore, the Board declines to modify the proposal further in response to this comment.
LABOR	At (3)(B), insert “effectively.”	The Board acknowledges the comment. In response, the Board modified subsection (h)(3) to promote safety and accountability. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
WSPA	The refinery employer shall periodically evaluate the performance of contractors in fulfilling their obligations, as specified in this subsection. The refinery employer shall require ensure and document that the requirements of this subsection are performed and completed by the contractor.	The requirement establishes the accountability of the contractor in ensuring that each employee is fully informed of safety and health procedures and is able to apply those procedures on the job competently.
i. Pre Start-Up Safety Review		
LABOR	At (1), add, "...and for unplanned shut-downs where process equipment was replaced."	The Board acknowledges the comment. In response, the Board modified subsection (i)(1) to promote safety and clarify the requirement. The Pre Start-Up Safety Review is required for modified processes if the modification necessitates a change in the PSI, which would include partial and unplanned shut-downs as well as turnarounds. Operating Procedures subsection (f) cover clear instructions for safely conducting activities involved in each process and address steps for each operating phase or mode of operation for start-up following an unplanned shut-down.
j. Mechanical Integrity		
WSPA	Inspections and tests shall be performed on process equipment using procedures that <u>are consistent with meet or exceed RAGAGEP or other equally or more protective internal standards.</u>	The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP.

Commenter	Comment	PSM Response
LABOR	At (2)(B), strike "...or other equally or more protective internal standards."	The Board acknowledges the comment. In response, the Board modified subsection (j)(2)(B). The proposal gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a Recognized and Generally Accepted Good Engineering Practice. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program.
LABOR	At (3)(A), strike "...or other equally or more protective internal standards."	The Board acknowledges the comment. In response, the Board modified subsection (j)(3)(A). The proposal gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a Recognized and Generally Accepted Good Engineering Practice. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program.
WSPA	The employer shall establish a process for evaluating new or updated codes and standards and implementing changes as appropriate to ensure safe operation, <u>unless prohibited by existing California regulations.</u>	The Board acknowledges the comment and declines to modify the proposal further. The proposed standard does not

Commenter	Comment	PSM Response
		conflict with other legal requirements.
k. Damage Mechanism Review		
Torrance	Concern that materials of construction must be resistant to <u>all</u> potential damage mechanisms, without limitation.	The Board acknowledges the comment and declines to modify the proposal further. A determination that materials of construction are appropriate for application is more appropriately done at the quality assurance stage. Quality assurance covers the evaluation of materials to ensure appropriate application. Quality assurance is covered in mechanical integrity subsection (j)(4)(A).
Chevron	Concern that the requirements for DMR are overly broad and should allow flexibility to conduct MOC in lieu of DMR to address certain changes.	The Board acknowledges the comment. In response, the Board modified the proposal to allow the employer flexibility in determining when to conduct a DMR as part of a Major Change.
WSPA	Where a damage mechanism is identified as a contributing factor in an incident investigation, pursuant to subsection (o), the employer shall review the most recent DMRs that are relevant to the investigation. If a DMR has not been performed on the processes that are relevant to the investigation, the incident investigation team <u>will identify the date the DMR is due. shall recommend that a DMR be conducted and completed within a specified timeframe.</u>	The requirements provide flexibility for the investigation team to recommend to the employer that a DMR be conducted and completed within specified timeframes. Recommendations must be addressed through the implementation of subsection (x) which only allows for three exceptions the refinery might use to reject a recommendation, subsection (x)(3). Therefore, the Board declines to modify the proposal further in response to this comment.
LABOR	At (5), see track changes that require the employer to conduct a DMR after a major incident if that incident involved a damage mechanism instead of the current language that simply authorizes the incident investigation team to make a recommendation to the employer, who is then able to accept or reject that recommendation.	

Commenter	Comment	PSM Response
LABOR	At (7), add "...in the performance of all DMRs...."	Subsection (q) requires employee participation in all aspects of the PSM program which includes the performance of DMRs as required in subsection (k)(7). Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	Determination that the materials of construction are appropriate <u>considering the</u> for their application and are resistant to potential damage mechanisms;	The Board acknowledges the comment and declines to modify the proposal further. A determination that materials of construction are appropriate for application is more appropriately done at the quality assurance stage. Quality assurance covers the evaluation of materials to ensure appropriate application. Quality assurance is covered in mechanical integrity subsection (j)(4)(A).
Tesoro	DMR should require "appropriate materials of construction..."	
1. Hierarchy of Hazard Controls Analysis		
WSPA	Concern regarding the appropriate utilization of HCA. It is best done in design phase and not on existing units.	The HCA requirement establishes a consistent performance standard to promote inherently safer systems. HCA is intended to surface options to eliminate or minimize process safety hazards based on inherent safety analysis, reflecting the purpose and intent of this regulation. The employer is given the flexibility to determine the corrective action plan per subsection (x). The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.
Chevron	Concern the requirements of the HCA are overly broad, too prescriptive and should be limited to the design phase.	
Tesoro	HCA should not be applied periodically to existing units since HCA rarely yields process safety benefits.	
Chevron /Valero	Overbroad Hazard Controls Analysis Provisions, Which Should Be Limited to the Design Phase.	
Energy API	Assessment of Inherent Safety Measures Should Occur at the Appropriate Time (design phase)	

Commenter	Comment	PSM Response
Chevron	The HCA requirements and schedule are incompatible and undermine effectiveness of PHA.	The HCA may be performed in conjunction with the PHA schedule or separately. The HCA provides information intended to be useful for the PHA, however a PHA cannot replace an HCA. The HCA requirement establishes a consistent performance standard to promote inherently safer systems. HCA is intended to surface options to eliminate or minimize process safety hazards based on inherent safety analysis, reflecting the purpose and intent of this regulation. The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.
CBE / Greenpeace	Expand public participation provisions to ensure that information needed for public participation in refinery safety decisions will be available to the public.	The Board acknowledges the comment and declines to modify the proposal further. Public participation is beyond the scope of this proposal.
CSB	Keep language in subsection (l) and make subsection (x) consistent	The Board acknowledges the comment and declines to modify the proposal further in response to this comment. The provisions throughout the proposal are consistent. The development of recommendations in subsection (l) form the corrective actions that are implemented pursuant to subsection (x).

Commenter	Comment	PSM Response
UCLA	Require HCA to be completed within 6 months of any risk identified in PHA.	The Board acknowledges the comment. In response, the Board modified the proposal to allow the employer flexibility to conduct an HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA.
CNA	Removing a six-month time limit by which a refinery would be required to evaluate inherent safety solutions to the most serious hazards identified in a Process Hazard Analysis (PHA). The draft does not propose an alternative time limit, but rather leaves it open-ended.	
CBE/ Greenpeace/ SoCalCOS H	Require Inherently Safer Systems Analysis (ISSA) for new projects before they are fully designed, permitted and built (in other words, before it is too late)	The Board acknowledges the comment. In response, the Board modified the proposal to allow the employer flexibility to conduct an HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA during the design of new processes.
LABOR	At (3), add "...in determining the make-up of the HCA team..."	The intent is to include employee participation in all phases of the HCA, including but not limited to composing the team. Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	The employer shall develop an effective review protocol to ensure that relevant, publically available information on inherent safety measures and safeguards is analyzed and documented by the team. This information shall include inherent safety measures and safeguards that have been achieved in practice by the petroleum refining	The Board acknowledges the comment. In response, the Board modified the proposal to give the employer flexibility to determine which publically available information on inherent safety measures and safeguards will be utilized as part of the PHA and

Commenter	Comment	PSM Response
	<p>industry and related industrial sectors; and (2) required or recommended for the petroleum refining industry and related industrial sectors, by a federal or state agency, or local California agency, in a regulation or report.</p>	<p>HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA.</p>
WSPA	<p>Recommend deletion of (I)(4)(E) because it is duplicative of (I)(4)(C). In addition, there should be a definition of Hierarchy of Hazard Control.</p>	<p>The Board acknowledges the comment. In response, the Board modified the proposal to include a definition for Hierarchy of Hazard Control, which provides the sequence and priority order for the HCA. The requirements in this subsection are consistent with the mandate from the Governor's Task Force Report to implement inherently safer systems.</p>
LABOR	<p>At (5), replace “developing” with “issuing.”</p>	<p>The report is required within 90 days of the development of the recommendations. The recommendations are included in this report, not submitted as a separate process. See subsection (I)(4)(E). Therefore, the Board declines to modify the proposal further in response to this comment.</p>
n. Management of Change		
Chevron	<p>Concern the requirements are overly broad and competitively damaging.</p>	<p>The Board acknowledges the comment and declines to modify the proposal further in response to this comment. Confidentiality agreements are provided for in subsection (q)(4) to address trade secret concerns.</p>

Commenter	Comment	PSM Response
LABOR	Request: Insert a new (2) (A) (B) (C) (D) pertaining to leak seal repairs.	The Board acknowledges this comment. In response, the Board modified the definition of temporary pipe or equipment repair. Also see subsection (n)(1) which specifically indicates that the MOC procedure shall include provisions for temporary repairs, including temporary pipe repairs.
WSPA	Employees involved in the process, as well as maintenance workers whose job tasks will be affected by a change, shall be informed of, and effectively trained in, the change in a timely manner, prior to implementation of the change. The employer shall make the <u>relevant portions of the MOC</u> documentation available to, and require effective training for, contractors and employees of contractors. For contractors and employees of contractors who are operating the process and whose job tasks will be affected by a change, the employer shall inform and require effective training in the change in a timely manner, prior to implementation of the change, pursuant to subsection (h).	The Board acknowledges this comment. In response, the Board modified the proposal to give the employer flexibility in how they make documentation available.
LABOR	At (6), add "...in the performance of all MOCs..."	Subsection (q) requires employee participation in all aspects of the PSM program which includes the performance of MOCs as required in subsection (n). Therefore, the Board declines to modify the proposal further in response to this comment.
o. Incident Investigation - Root Cause Analysis		

Commenter	Comment	PSM Response
CNA	Introducing ambiguities to language pertaining to Damage Mechanism Reviews (DMRs), which refineries are required to conduct in order to track and mitigate the effects of corrosion, erosion, and thermal-related weaknesses in their pipes and equipment. The September 2015 draft required refineries to conduct a DMR in the wake of a major fire, explosion or loss of containment, whereas the July 2016 proposal merely recommends that such action be taken.	The Board acknowledges this comment and declines to modify the proposal further in response to this comment. DMR is an inappropriate vehicle for post-incident analysis. This is incorporated into the Root Cause Analysis provided in subsection (o), which requires analysis of DMRs completed prior to the incident.
Chevron	Concern about requirements and implications for the protection of employer's proprietary information.	The Board acknowledges the comment and declines to modify the proposal further in response to this comment. Confidentiality agreements are provided for in subsection (q)(4) to address trade secret concerns.
LABOR	At (4), add "in the performance of all incident investigations..."	Subsection (q) requires employee participation in all aspects of the PSM program which includes the performance of incident investigations as required in subsection (o). Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	The Incident Investigation Team shall implement the employer's Root Cause Analysis method to determine the <u>underlying</u> initiating causes of the incident. The analysis shall include an assessment of management system <u>causes</u> failures , including organizational and safety culture <u>causes</u> deficiencies .	The purpose of the RCA is to identify and assess the underlying factors that contributed to a major incident or near miss. This requires a thorough and systematic analysis of the events and conditions that caused an incident. Text updated to include "underlying" causes. The terms used in the regulations including "management system failures" and "safety culture deficiencies" are commonly used
Chevron	RCA should be consistent with industry practices.	
Chevron	Concern that RCA requirements are overly broad. Suggest use of the term "underlying" cause in lieu of "initiating" cause.	
CSB	Provide goal or reason for root cause analysis	

Commenter	Comment	PSM Response
Kern Oil & Refining	Concern that RCA requirements for near misses are overly broad.	terms when conducting the Root Cause Analysis.
Kern Oil & Refining	Concern that the requirements for interim measures are mandatory and unnecessary.	This requirement is necessary because effectively reducing the risk of a similar incident may require the employer to take short-term, interim actions that could be implemented in the near term. This requires the employer to mitigate process safety hazards while simultaneously developing a longer-term prevention plan. Therefore, the Board declines to modify the proposal further in response to this comment
WSPA	The team shall prepare a written investigation report within ninety (90) calendar days of the incident. If the team demonstrates in writing that additional time is needed due to the complexity of the investigation, the team shall prepare a status report within ninety (90) calendar days of the incident and every thirty (30) calendar days thereafter until the investigation is complete. The team shall prepare a final investigation report <u>upon completion of the investigation. If the investigation is not complete, within five (5) months of the incident, the team shall prepare an interim investigation report. This interim report shall be made available to the Division upon request.</u>	The 5-month timeline allows CalOSHA time to review the report in advance of the six month statute of limitations imposed by Labor Code section 6317. Also, the employer is given flexibility (see subsection(o)(7)) to demonstrate that additional time is needed due to the complexity of the investigation. Prompt investigation of incidents is necessary to ensure the information gathered is relevant and accurate and available for use in improving the safety of the unit and/or process.
Chevron	Concern that timelines are too prescriptive.	
Tesoro	Incident investigation report: the timelines are not feasible.	
WSPA	Investigation reports shall be provided to and upon request, reviewed with employees whose job tasks are affected by the incident. Investigation reports shall also be made available to all operating, maintenance and other personnel, including employees of contractors where applicable, whose work assignments are within the facility where the	The Board acknowledges this comment. In response, the Board modified the proposal to clarify the conditions under which the employer must provide investigation reports to employee representatives.

Commenter	Comment	PSM Response
	incident occurred or whose job tasks are relevant to the incident findings. <u>Upon request</u> , investigation reports shall be provided to employee representatives and, where applicable, contractor employee representatives.	
LABOR	At (11), see track changes, requiring the refinery to proactively notify employees of the availability of incident investigation reports.	Safety is most enhanced when those directly involved in the process are informed and educated about the findings, as provided in subsection (o)(11). Other employees may also review the reports at any time. Therefore, the Board declines to modify the proposal further in response to this comment.
q. Employee Participation		
Chevron	Concern that employee participation requirements are overly broad and too prescriptive.	Effective employee participation is necessary to ensure process safety in all refinery operations because employees are often the first to become aware of process safety hazards. Participation of an employee representative: The term is interpreted broadly to include union and non-union facilities. Employee representatives in unionized facilities may include the local union, the international union, or a refinery or contract employee designated by these parties.
Chevron	Concerns about implications for collective bargaining agreements.	Collective bargaining agreements are between the union and the employer. For purposes of this subsection (q), employees are entitled to select representatives of their choosing, including experts who may be outside the refinery or with other unions who are not employed directly by the refinery. The proposed requirements ensure

Commenter	Comment	PSM Response
		adequate employee participation for all refineries.
WSPA	Employee participation should be limited to relevant analyses and programs not previously developed under Section 5189.	The requirement ensures meaningful participation for affected operating and maintenance employees and employee representatives in all program teams for all analyses required in the section. The suggested language would limit employee participation throughout the regulation and undermine the mandate for such participation outlined in the Governor's Task Force report.
LABOR	Request: At (1)(A), add "...throughout all phases..."	The Board acknowledges the comment. The Board accepted this recommended modification.
LABOR	At (1)(B), add "...throughout all phases..." and replace "the" with "all."	The Board acknowledges the comment. The Board modified the proposal to add "throughout all phases" but declines to replace "the" with "all."
WSPA	(2) <u>In accordance with the collective bargaining agreement in effect for the refinery, an authorized collective bargaining agents may select (i) employee representative(s) to participate in overall PSM program development and implementation planning and (ii) employee(s) to participate in PSM teams and other activities, pursuant to this section.</u>	Collective bargaining agreements are between the union and the employer. For purposes of this subsection (q), employees are entitled to select representatives of their choosing, including experts who may be outside the refinery or with other unions who are not employed directly by the refinery. The proposed requirements ensure adequate employee participation for all refineries.
Chevron	Concern about employee participation requirements and protection of employer's proprietary information.	The confidentiality provisions regarding trade secret information are intended to allow the employer to take whatever steps necessary to protect the employer and

Commenter	Comment	PSM Response
		prohibit disclosure. See subsections (h)(4) and (q)(4).
LABOR	At (5), see text changes requiring the employer to "develop and implement the following," as compared to simply developing "a system to implement the following."	The Board acknowledges the comment. The Board accepted this recommended modification.
Chevron	Concern that the proposed timeline is too prescriptive.	The Board acknowledges the comment. The timeline provides the employer with a flexible period of time to respond to written hazard reports. Stop Work procedures promote safety and transparency. As outlined in the Governor's Task Force Report, the employer shall address and correct hazards that present the potential for death or serious physical harm, by eliminating or minimizing the hazard. The Board declines to modify the proposal further in response to this comment.
Chevron	Concern that requirements and timelines are too burdensome. Concern that Stop Work procedures are overly broad.	
UCLA	Involve worker participation in decisions about staffing levels, experience, and human factors analysis, PSCA, Stop Work Procedures, subsection (q)(5)(A). Employee participation is constrained for fear of reprisal.	The Board acknowledges the comment. Worker participation at all levels is required through the regulation pursuant to subsection (q), including an evaluation of issues such as staffing. Responsibility for decision making resides with the employer. Subsection (q)(5)(B) requires effective procedures that ensure the right of all employees, including employees of contractors, to anonymously report hazards. To protect against employer retaliation in all industries and workplaces, the Labor Commissioner's Office enforces these protections for workers.

	Commenter	Comment	PSM Response
	CSB	Remove "...prioritize and..." when addressing hazard that could cause death or serious harm	The Board acknowledges the comment. The proposal provides the employer with a flexibility to respond to written hazard reports. As outlined in the Governor's Task Force Report, the employer shall address and correct hazards that present the potential for death or serious physical harm, by eliminating or minimizing the hazard. The Board declines to modify the proposal further in response to this comment.
	UCLA	(q)(5)(B) needs to be more transparent.	The Board acknowledges the comment. Documentation of all aspects of these requirements are described in subsection (q)(6). Subsection (q)(1)(C) provides for employee access to this information. The Board declines to modify the proposal further in response to this comment.
	WSPA	(6) The employer shall document the following: (A) <u>KNOWN</u> Recommendations to partially or completely shut-down an operation or process, pursuant to subsection (q)(5)(A)(2);	The proposal covers recommendations that are known to the employer. The Board declines to modify the proposal further in response to this comment.
r. Process Safety Culture Assessment			
	Chevron	Concern the 24 month deadline is ambiguous and too prescriptive.	The 24 month timeline was established through stakeholder input and is a reasonable timeframe for implementing the requirement. The Board modified the proposal to include a grandfathering provision that gives the employer flexibility to use previously conducted PSCA that meet the requirements of this proposal. Refineries that currently conduct PSCAs should
	Tesoro	Suggested the proposal include grandfathering provisions.	

Commenter	Comment	PSM Response
		receive credit for being proactive.
WSPA	(2) The employer shall conduct an effective PSCA and produce a written report within eighteen (18) months following the effective date of this section, <u>unless one was already done within the last 3.5 years</u> , and at least every five (5) years thereafter.	The employer is required to conduct a PSCA in compliance with the proposed regulations. The PSCA requirements are mandated by the recommendations of Governor's Task Force report.
LABOR	At (3), add "...in the performance of all PSCAs..."	Per subsection (r)(3), the employer shall provide for employee participation pursuant to subsection (q)(1)(A), which is intended to apply to all PCSAs. Therefore, the Board declines to modify the proposal further in response to this comment.
LABOR	At (6), see track changes pertaining to priority recommendations.	The Board acknowledges the comment. In response, the Board updated the language to clarify that the implementation requirements include corrective actions. The 24 month timeline was established through stakeholder input and is a reasonable timeframe for implementing the requirement. Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	Suggested inclusion of a management review and approval process to verify PSCA reports.	The proposal specifies that the employer is required to designate the refinery manager or designee as the person with authority and responsibility for all aspects of PSM, which ensures accountability and transparency. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
WSPA	WSPA disagrees with refinery manager duties throughout the proposal.	
Tesoro	Concern with accountability and implementation tied to refinery manager	

Commenter	Comment	PSM Response
Torrance	The Proposed Regulations Appear to Go Beyond OSHSB's Authority to Regulate Employers, Not Employees	Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	(9) PSCA reports, corrective action plans and Interim Assessments shall be communicated and made available to employees, their representatives and participating contractors within <u>sixty (60)</u> thirty (30) calendar days of completion.	The Board acknowledges the comment and modified the proposal from thirty (30) calendar days to sixty (60) calendar days.
WSPA	(10) Participating contractors shall provide PSCA reports, corrective action plans and Interim Assessments to their employees and employee representatives within <u>thirty (30)</u> fourteen (14) calendar days of receipt.	The timelines were established through stakeholder input and reflect a reasonable timeframe for implementing the requirements. Therefore, the Board declines to modify the proposal further in response to this comment.
s. Human Factors		
WSPA	The employer shall assess Human Factors in <u>(a) existing operating procedures for startup shutdown and emergency shutdown and (b) maintenance procedures wherein the process equipment is online</u> and shall revise these procedures accordingly. The employer shall complete fifty (50) percent of assessments and revisions within three (3) years following the effective date of this section and one hundred (100) percent within five (5) years.	All existing operating and maintenance procedures should have a human factors analysis conducted, not limited to shut down, start up and emergency shutdown procedures. Human factors analysis is especially important for temporary operating procedures, which are used under higher risk conditions. All new and revised operating and maintenance procedures, online and offline, benefit from human factors analysis to ensure the safety of the workers. Therefore, the Board declines to modify the proposal further in response to this comment.
Chevron	Suggested that Human Factors requirements should allow for grandfathering. Concerns that the requirements are overly broad and too prescriptive.	The Board acknowledges this comment. Analysis that meets the requirements of the subsection may count towards fulfillment of the 50% of assessments required within 3

	Commenter	Comment	PSM Response
			years of the effective date of this section.
	Energy API	No Evidence has been Presented to Demonstrate a Stand-Alone Human Factors Program is Necessary.	This subsection aligns with the mandate of the recommendations of the Governor's Task Force report. The federal OSHA National Emphasis Program for Refineries included Human Factors as one of the 12 core elements of an effective PSM program. The proposed requirements ensure that Human Factors are assessed with other process safety risks. The US Chemical Safety and Hazard Investigation Board (CSB) identified Human Factor deficiencies as major contributors to the explosion and fatalities at the BP Texas City Refinery in March 2005. The Human Factor deficiencies included worker fatigue, poor human-system-interface design, poor radio and telephone communication, out-of-date and inaccurate operating procedures, and poor communication between workers across shifts. It is necessary that the employer integrates human factors analysis into the PSM program, justifying the requirements described in subsection (s).

Commenter	Comment	PSM Response
<p>UCLA School of Public Health/ Center for Occupational and Environmental Health</p>	<p>Management for Petroleum Refineries; comments in support of fatigue risk management to the proposed PSM language:</p> <p>(c) Retain the following wording in Human Factors definition “Human factors include...organization and job factors, as well as human and individual characteristics, such as fatigue, that can affect job performance, process safety, and health and safety”.</p> <p>(o) Add “human factors” to the requirements for incident investigations in item (5).</p> <p>(s) Maintain the wording “staffing levels; the complexity of tasks; the length of time needed to complete tasks; the level of training, experience and expertise of employees; the human-machine and human-system interface; the physical challenges of the work environment in which the task is performed; employee fatigue and other effects of shift work and overtime...” in item (4).</p> <p>(t) Maintain the wording “conduct a MOOC assessment prior to reducing staffing levels, reducing classification levels of employees, or changing shift duration or employee responsibilities” in item (2).</p>	<p>The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation. Regarding the definition of "human factors", the Board maintains that environmental factors (such as radiant heat) are important to consider in terms of human factors.</p>
<p>WSPA</p>	<p>The employer shall include a written analysis of Human Factors, where relevant, in major changes, <u>major</u> incident investigations, PHAs, MOOCs and HCAs. The analysis shall include a description of the selected methodologies and criteria for their use.</p>	<p>The comment limits the effectiveness of human factors analysis to only major incidents in lieu of all incident investigations (which include major incidents). The proposed regulations reflect the requirements mandated by the recommendations in the Governor's Task Force Report. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
LABOR	At (2), strike “where relevant.”	The proposal is intended to give employers flexibility in conducting human factors analysis when applicable to the process. Therefore, the Board declines to modify the proposal further in response to this comment.
LABOR	Request: At (3) Change 3 and 5 years to 2 and 4 years.	The timeline was established through stakeholder input and is a reasonable timeframe for implementing the requirement. Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	(6) The employer shall include an assessment of Human Factors in new operating <u>procedures for startup shutdown and emergency shutdown</u> and maintenance procedures <u>wherein the process equipment is online</u> .	All existing operating and maintenance procedures should have a human factors analysis conducted, not limited to shut down, start up and emergency shutdown procedures. Human factors analysis is especially important for temporary operating procedures, which are used under higher risk conditions. All new and revised operating and maintenance procedures, online and offline, benefit from human factors analysis to ensure the safety of the workers. Therefore, the Board declines to modify the proposal further in response to this comment.
t. Management of Organizational Change		
WSPA	The employer shall designate a team to conduct a MOOC assessment prior to reducing staffing levels, reducing classification levels of employees, or changing shift duration or <u>substantively increasing position</u> employee responsibilities. The employer shall provide for employee participation pursuant to subsection (q). The	As written, the proposed requirements reflect the intent of the regulations to require a MOOC assessment prior to reducing staffing levels, reducing classification levels of employees, or changing shift duration or employee

Commenter	Comment	PSM Response
	<p>MOOC assessment is required for changes with a duration exceeding <u>six (6) months</u> 90 calendar days affecting operations, engineering, maintenance, <u>process health</u> and safety, or emergency response. This requirement shall also apply to employers using employees of contractors in permanent positions.</p>	<p>responsibility. The Board modified the proposal to specify the 15% threshold as a recognized industry standard and to provide consistency. The term suggested in the comments, "substantively", would raise the threshold for requiring the MOOC, making it less effective, and introduces vague language. The 90 day timeline aligns with the duration of a schedule change for turnaround work. Health and safety of employees is necessary to consider because it can have a direct or indirect effect on a process. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Chevron	<p>Concerns that MOOC requirements are overly broad and too vague in describing reductions in staffing levels.</p>	<p>In response to this comment, the Board modified the proposal to clarify specific triggers for a MOOC assessment. The 15% threshold is a recognized industry standard and is used here to provide consistency. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
LABOR	<p>At (2), see track changes pertaining to experience and classification</p>	<p>The employer shall provide for employee participation pursuant to subsection (q)(1)(A), which is intended to apply to all MOOCs. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
LABOR	<p>At (2), add, "...in the performance of all MOOCs..."</p>	<p>The Board acknowledges the comment. In response, the Board modified the proposal to provide a standard by which a refinery manager or their designee is required to certify the MOOC</p>
WSPA	<p>Suggested inclusion of a management review and approval process to verify that the MOOC assessment is accurate and that the proposed organizational change meets the requirements of this subsection.</p>	<p>The Board acknowledges the comment. In response, the Board modified the proposal to provide a standard by which a refinery manager or their designee is required to certify the MOOC</p>

Commenter	Comment	PSM Response
		assessment. The modification is necessary to ensure accountability and transparency.
u. Compliance Audits		
CSB	Include documentation of deficiencies, recommendations, and corrective actions taken in audit reports.	The Board acknowledges the comment. The proposal requires employers to document the findings and recommendations in a written report. The employer is required to implement all recommendations in accordance with subsection (x). Consultation with operators who have expertise and experience in each process audited provide direct, line-level knowledge of operation in the practical application of running a unit. The requirement to document these consultations ensures their input is included. Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	The Compliance Audit shall be conducted by at least one person with expertise and experience in the requirements of the subsection under review. As part of the Compliance Audit, the employer shall consult with operators with expertise and experience in each process audited and shall document the findings and recommendations from these consultations in the written report. The report shall state the qualifications and identity of the persons performing the Compliance Audit.	
Chevron	Concern that Compliance Audits requirements for engagement with employees may undermine the effectiveness of the audit.	
v. Process Safety Management Program		
WSPA	The employer refinery manager shall be responsible for compliance with this section.	The Board acknowledges this comment. In response, the Board modified the proposal to clarify that the employer is required to designate the refinery manager as the person with authority and responsibility for all aspects of PSM, which ensures accountability and transparency. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
Chevron	Concern that PSM program refinery manager responsibility is incompatible with the provision's statutory basis.	

Commenter	Comment	PSM Response
Chevron /Valero	Inappropriate Allocation of Responsibilities and Rights to Certain Employees: Refinery Manager Responsibilities, Employee Representative Designation	The Board acknowledges this comment. In response, the Board modified the proposal to clarify that the employer is required to designate the refinery manager as the person with authority and responsibility for all aspects of PSM, which ensures accountability and transparency. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Regarding comments about the definition for "employee representative" and subsection (q), the Board refers the commenter to responses provided to WSPA and API.
w. Division Access to Documents and Information		
Chevron	Concern that the access to documents and information requirements in this subsection are overly broad, vague and unnecessary.	The Board acknowledges this comment. This subsection allows the Division to efficiently obtain information for evaluating and enforcing the effectiveness of a refinery's process safety program. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.
WSPA	The employer shall provide all documents and information developed or collected pursuant to this Section to the Division upon request.	
x. Implementation		
Tesoro	Implementation should allow flexibility for incident investigation if infeasible to complete within 18 months	The Board acknowledges the comment. The commenter's concerns are addressed in subsection (x)(14).

Commenter	Comment	PSM Response
Tesoro	Implementation should allow flexibility for corrective action schedule.	The Board acknowledges the comment. The commenter's concerns are addressed in subsections (x)(10), (x)(11), (x)(12). The proposal allows for the employer to adjust corrective action implementation schedules with a demonstration in writing that it is infeasible to do so.
WSPA	(3) The employer may reject a team recommendation if the employer can demonstrate in writing that the recommendation meets one of the following criteria: (A) The analysis upon which the recommendation is based contains material factual errors; (B) The recommendation is not <u>necessary to protect the health and safety of the employer's own employees or contractor employees relevant to process safety</u> ; or, (C) <u>The recommendation is infeasible; however, a determination of infeasibility shall not be based solely on cost.</u> (D) <u>An alternative measure would provide a sufficient level of protection.</u> Recommendation to delete (x)(4).	The proposal offers flexibility to the employer, but is restricted to the scope of this proposal relating to eliminating or minimizing process safety hazards. Cost alone of implementing a recommendation is not a sufficient basis for the employer to reject a recommendation as infeasible. Alternative measures must provide an equivalent or higher order of inherent safety to eliminate risks based on inherent safety analysis, reflecting the purpose and intent of this regulation. This phrasing is consistent with the mandate from the Governor's Task Force Report to implement inherently safer systems. The suggested language in the comments is overly broad and does not provide an adequate level of protection as specified in subsection (x)(4). The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.
Chevron	Concern the requirements in (3) and (4) are overly prescriptive, costly, and unnecessary. Concern that limitations to employer's ability to modify recommendations may have negative consequences.	
Chevron /Valero	Concern about the ability of employer to manage facility decision-making	
WSPA	(4) The employer may change a team recommendation if the employer can demonstrate in writing that an alternative measure would provide an equivalent or higher order of inherent safety. The employer may change a team recommendation for a safeguard if an alternative safeguard provides an equally or more effective level of protection.	

Commenter	Comment	PSM Response
WSPA	(6) Each recommendation that is changed or rejected by the employer shall be made available to team members for comment. The employer shall document all comments received from team members for each changed or rejected recommendation. The employer shall document a final decision for each recommendation and shall make it available to team members.	The Board acknowledges the comment. In response, the Board modified the proposal to give employers flexibility in communicating changes to recommendations. This ensures that each team member is aware of, and able to comment on, any recommendation that the employer has elected to change or reject. This ensures transparency and accountability in addressing team recommendations.
Chevron	Documentation requirements are impractical and will stifle open and honest dialogue about recommendations.	
LABOR	At (6), see changes requiring employer to actively communicate back to PSM team members if the employer changes or rejects a team recommendation.	
WSPA	The employer shall promptly complete all corrective actions and shall comply with all completion dates required by this subsection. <u>Any changes made to established completion dates must be done in accordance with the employer's documented corrective action deferral process. This deferral process must include the requirements to document the reasons for the change, evaluate the risk associated with the change, and be reviewed/approved by refinery management. The employer shall conduct an MOC for any proposed change to a completion date, pursuant to subsection (n).</u> The employer shall make all completion dates available, upon request, to all affected operation and maintenance employees and employee representatives.	The Board acknowledges the comment. The term "deferral process", as suggested in the comments, is not a known or formal process, nor is it in any part of the proposal. Changes to completion dates must follow the MOC requirements. This is necessary to ensure that the requirements adhere to an established and standardized process. Therefore, the Board declines to modify the proposal further in response to this comment.
Kern Oil & Refining	Opposes the use of MOC to manage changes to completion dates.	
Chevron	Opposes the use of MOC to manage changes to completion dates.	

Commenter	Comment	PSM Response
WSPA	Each corrective action from a Compliance Audit shall be completed within eighteen (18) months after completion of the audit, unless the employer demonstrates in writing that it is infeasible to do so. Each corrective action from an incident investigation shall be completed within eighteen (18) months after completion of the investigation, <u>unless the employer demonstrates in writing that it is infeasible to do so.</u>	The Board acknowledges the comment. In response, the Board accepted the comment and modified the proposal to allow the employer limited flexibility to demonstrate in writing the circumstances and rationale that make it infeasible to meet the prescribed time limits for completion of corrective actions resulting from an incident investigation. The timeline was established through stakeholder input and is a reasonable timeframe for implementing the requirement. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
Chevron	Concern that timeframe is overly prescriptive and ignores the complexity of the refinery operations. Timeframes are arbitrary.	
WSPA	Notwithstanding subsections (x)(10), (x)(11) and (x)(12), corrective actions addressing process safety hazards <u>that could reasonably result in a major incident</u> shall be prioritized and promptly corrected, either through permanent corrections or interim safeguards sufficient to ensure employee safety and health, pending permanent corrections.	This requirement establishes the prioritization of corrective actions addressing process safety hazards because the risks posed by these hazards could result in a major incident or employee injury. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.
Chevron	Concern that the requirements are vague, costly, and overly broad regarding correction of process safety hazards.	
LABOR	At (13), delete "...prioritized and..."	

General Responses to Comments Submitted During 45 day Comment Period

Commenter	Comment	PSM Response
Torrance	Compliance audits: inconsistent with CalARP. They prefer the PSM language.	The Board acknowledges the comment and support or the subsection.

Commenter	Comment	PSM Response
WSPA	The regulation does not have grandfathering clauses to recognize the needed transition to continue meeting both existing Federal requirements, Certified Unified Program Agency (“CUPA”) requirements as well as defining and incorporating new regulatory requirements. The regulation also does not have implementation timelines for all the requirements that need it. Examples include Process Safety Information (“PSI”), Process Safety Culture Assessments (“PSCAs”), employee participation, existing projects meeting the Major Change criteria that are in the execution phase and existing recommendations.	The Board acknowledges this comment. In response, the Board modified PSCA to include a grandfathering provision. In addition, the proposal includes grandfathering provisions for other subsections. The proposal does not prevent a refinery from using existing procedures or analyses provided they meet the requirements of the proposed regulations. The proposal contains timelines for completion of various analyses and implementation of corrective actions.
WSPA	Global issue with Effective. The term has been inserted in every element to qualify many references to training and involvement by employees in activities.	The proposal is a performance standard, giving the employer flexibility to evaluate and implement the most protective approaches to preventing or mitigating process safety hazards. The term enables DOSH to evaluate and enforce the compliance of each facility based on the performance standard.
WSPA	General areas of concern about implementation listed in a letter submitted by Cathy Reheis-Boyd of WSPA dated September 15, 2016, incorporating “WSPA Comment Matrix on Proposed CalPSM Regulation Amendments”.	The Board acknowledges the concerns and refers the commenter to the detailed responses to each of the comments provided in the “WSPA Comment Matrix on Proposed CalPSM Regulation Amendments”. The proposal is consistent with the mandate from the Governor's Task Force Report. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
CHANGE/ SoCalCOS H	Support: reinstating timelines; meaningful employee participation; requiring refineries to apply best practices as developed by authoritative	The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation.

Commenter	Comment	PSM Response
	bodies; greater accountability and transparency.	
Chevron /Valero	Undefined Standards - effective	The proposal is a performance standard, giving the employer flexibility to evaluate and implement the most protective approaches to preventing or mitigating process safety hazards. The term enables DOSH to evaluate and enforce the compliance of each facility based on the performance standard.
Chevron /Valero	The proposed GISO is not reasonably necessary to effectuate the purpose of Labor Code section 7856.	The proposal is necessary to improve safety and meet the requirements and goals mandated in the Governor's Task Force report. This proposal reflects a combination of performance and prescriptive regulations, selected based on the most effective approach. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
Chevron /Valero	Because it does not comply with the APA, the proposed GISO needs to be revisited if the board wishes to issue a rule of this type.	The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
CICC/ Chevron /Valero	CalARP and PSM and federal regulations-- need to be consistent. Areas: definitions and provisions	The Board acknowledges the comment. As written, the requirements listed in the respective proposals are in alignment. While there may be minor differences in wording and formatting, the requirements are consistent and align with the goals mandated in the Governor's Task Force. Therefore, the Board declines to modify the proposal further in response to this comment.
CSB	Include requirements for employers to track specific process safety indicators, including the number of major incidents, past-due inspections of process piping and pressure vessels, past-due recommended actions, and indicators related to leak seals	Requirements to track and document process safety performance indicators are located in subsection (v)(4) Process Safety Management Program.

Commenter	Comment	PSM Response
Energy API	The California Legislature, not the Governor, grants the board the authority to promulgate new regulations.	The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
Energy API	New Regulations Should be Based Upon Evidence That a Need Exists	The proposal is necessary to improve safety and meet the scope, requirements and goals mandated in the Governor's Task Force report. This proposal reflects a combination of performance and prescriptive regulations, selected based on the most effective approach. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
Energy API	The Proposed Rule Expands the Scope, Purpose, and Application of PSM	
Energy API	This Proposal is a Shift Towards Prescriptive Regulations	
Energy API	Cal/OSHA Attempts to Promulgate an "Effective" Standard by Requiring "Effective" Activities	The proposal is a performance standard, giving the employer flexibility to evaluate and implement the most protective approaches to preventing or mitigating process safety hazards. The term enables DOSH to evaluate and enforce the compliance of each facility based on the performance standard.
Energy API	Cal/OSHA PSM and CalARP Regulations Should Not be Modified Simultaneously	The Board acknowledges the comment. As written, the requirements listed in the respective proposals are in alignment. While there may be minor differences in wording and formatting, the requirements are consistent and align with the goals mandated in the Governor's Task Force. Therefore, the Board declines to modify the proposal further in response to this comment.
Energy API	The Proposed Rule Will Not Be as Effective as Federal Standards	The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. The proposal is at least as effective as the current federal standards. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program.

Commenter	Comment	PSM Response
Energy API	"To the Greatest Extent Feasible" is Untenable	The Board acknowledges this comment. This phrasing and standard is consistent with the mandate from the Governor's Task Force Report to implement inherently safer systems. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
Energy API	CalOSHA misunderstands industry's approach to recommendations	The proposal offers flexibility to the employer to accept, reject, or change a team recommendation. Cost alone of implementing a recommendation is not a sufficient basis for the employer to reject a recommendation as infeasible. Alternative measures must provide an equivalent or higher order of inherent safety to eliminate risks based on inherent safety analysis, reflecting the purpose and intent of this regulation. This phrasing is consistent with the mandate from the Governor's Task Force Report to implement inherently safer systems.
Kern Oil & Refining	Urges Board to provide simplified and streamlined PSM option for smaller, less complex refineries; full PSM is not justified. This specifically applies to certain requirements in subsections (e), (h), (i), (r).	The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.
LiUNA	Proposed rule will help prevent refinery accidents. Hierarchy of Controls Analysis(HCA) is important protection by requiring hazard elimination. Root cause analysis of incident investigation is critical to prevention; Also in agreement to Safety Culture Assessment, Human Factors analysis	The Board acknowledges the comment and support of the subsection.
Mike Lee, Tesoro USW representative	Do not allow the language to be further weakened.	The Board acknowledges the comment. The proposal will increase safety in California's refineries to protect workers and surrounding communities.

Commenter	Comment	PSM Response
NJ Work Environmen t/ Mossville Environmen tal Action Now/ Society of Occupations & Environmen tal Health/ Center for Health, Environmen t & Justice/ CT Coalition for Environmen tal & Economic Justice/ Alaska Community Action on Toxics/ Moms Clean Air Force/ Woman's Voices for the Earth/ Coming Clean/ Whyte Pediatrics/ Nontoxic / Union of Concerned Scientists / Greenpeace/ Communica	Support of the recommendations dated September 2, 2016 that were submitted in a joint letter to the Board by the Blue Green Alliance, United Steelworkers and the California Federation of Labor. We urge the Board to: (1) adopt the changes to the PSM proposal called for in the joint letter; (2) resist any further weakening of the proposal; and (3) move the proposal forward for adoption as quickly as possible. (See Details from Blue Green Alliance listed above).	The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation.

Commenter	Comment	PSM Response
<p>tions Workers of America, District 9/ Community Science Institute/ Worksafe</p>		
<p>NRDC</p>	<p>In support of BGA comments</p>	<p>The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation.</p>
<p>Phillips 66/ Western States Petroleum</p>	<p>Supports comments submitted by WSPA.</p>	<p>The Board acknowledges the comment and refers the commenter to the responses to WSPA.</p>
<p>PSR</p>	<p>Physicians for social responsibility, support comments submitted by BGA</p>	<p>The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation.</p>
<p>Sierra Club</p>	<p>In support of BGA comments</p>	<p>The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation.</p>
<p>Tesoro</p>	<p>Statutory Authority to Issue: The Labor Code Does Not Provide DIR the Authority to Issue the Proposed Rule; the proposed rule is inconsistent with the intent of the Legislature; The proposed rule must be reasonably necessary; The Proposed Rule is Not Supported by a Valid Cost-Benefit Analysis.</p>	<p>The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.</p>
<p>Tesoro</p>	<p>Transition from existing regulations to final regulations should include grandfather clause.</p>	<p>The Board acknowledges this comment. In response, the Board modified PSCA to include a grandfathering provision. In addition, the proposal includes grandfathering provisions for other subsections. The proposal does not prevent a refinery from using existing procedures or analyses provided they meet the requirements of the proposed regulations.</p>

Commenter	Comment	PSM Response
		The proposal contains timelines for completion of various analyses and implementation of corrective actions.
Tesoro	Limit applicability of proposed PSM regulations to process areas that contain a threshold quantity of highly hazardous materials.	The regulations are intended to cover all processes within petroleum refineries to reduce the risk of major incidents and eliminate or minimize process safety hazards to which employees may be exposed. As a performance based regulation, the employer is given flexibility to evaluate and implement the most effective approach.
Tesoro	Proposed Revision: Definitions: "Major Changes"; "Process"; interconnected Definition Definition: "process equipment" Hierarchy of Hazard Controls Analysis. Revise Damage Mechanism Review. Remove references to the position of refinery manager that would assign responsibility for PSM compliance to a single individual. Revise the SPA requirements to allow the use of qualitative analyses when appropriate. Process Safety Culture Assessment and Implementation	The Board acknowledges the comment and refers the commenter to the responses to WSPA and API and Tesoro for the respective definitions and subsections.
Tesoro	DIR should withdraw the proposed rule until it: <ul style="list-style-type: none"> • obtains the necessary legislative authority; • demonstrates that the rule is reasonably necessary; and • performs an economic analysis that demonstrates its cost effectiveness. DIR should continue to work with petroleum refiners through WSPA to refine the scope of the proposed rule and address the implementation issues raised in these comments.	The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Labor Code sections 142.3 and 7856 give the authority and reference for promulgation of the proposal. The Governor's Task Force report provides additional justification for promulgating these regulations. The RAND analysis provides the cost-benefit analysis and justification.

Commenter	Comment	PSM Response
Torrance	The Proposed Definitions are Overbroad, Not Cost-Effective, and Far More Burdensome Than Equally Effective Alternatives	The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. The Board refers the commenter to the responses to WSPA and API and Tesoro for the respective definitions and subsections. The RAND analysis provides the cost-benefit analysis and justification.
Torrance	OSHSB Fails to Consider Equally Effective and Less Burdensome Alternatives for Costly Proposed Regulations That Create Little or No Benefit	The Board acknowledges this comment. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. The Board refers the commenter to the responses to WSPA and API and Tesoro for the respective definitions and subsections. The RAND analysis provides the cost-benefit analysis and justification. See subsection (x)(4) which provides the allowances for equally protective alternative measures.
Torrance	The Proposed Regulations Create Unnecessarily Prescriptive Standards That Remove Flexibility Needed to Ensure Safety and Minimize Accidental Releases	The Board acknowledges the comment. The proposal is a performance standard, giving the employer flexibility to evaluate and implement the most protective approaches to preventing or mitigating process safety hazards.
USW Local 5 / City Council Candidate, Richmond Ca	Overall Worker Safety, Environmental responsibility, Community Safety, Industry Reliability/Profitability. Supports PSM proposal that was submitted jointly to the Standards Board on September 2nd, by the USW, Blue Green Alliance and the California Labor Federation.	The Board acknowledges the comment and refers the commenter to the responses to the BlueGreen Alliance, USW, and California Labor Federation.
Valero	VPP star sites identified under the program. Refineries with VPP star certification meet many of the requirements.	The Board acknowledges the comment. VPP certified employers must comply with the proposal but continue to be exempt from planned inspections.
Worley Parsons	There are at least 15 references throughout the regulation for employers to develop, implement, or	The proposal is a performance standard, giving the employer flexibility to evaluate and implement the most protective

Commenter	Comment	PSM Response
	<p>otherwise evaluate measures that are “effective.” .2. It is recommended that some requirement from Cal/OSHA to approve the quantitative risk assessment matrix used by refiners or otherwise provide a guideline to petroleum refineries.3. Add a bullet to the definition of a ‘Major Change’ to include any control system change that alters the behavior of a final element. 4. required identification of PELs, consider including a requirement to measure exposure limits or otherwise quantify them. 5. requires material and energy balances for processes built after Sept. 1, 1992, consider including a requirement for historical material and energy balances for processes built before Sept. 1 1992 if such data is available. 6. Item d-8 requires that processes that do not have RAGAGEP exists be documented to be safe, consider adding a requirement that the determination of the availability of an existing RAGAGEP be reconsidered at every HAZOP. In addition consider requiring that the safety of such processes & systems be determined by a California licensed engineer as appropriate. 7. No functional safety/ISA 84 nor cybersecurity/ISA 99 requirements seem to be explicitly included in the new regulations. Consider requiring that such work be conducted under the responsible charge of a licensed California controls system engineer that is competent to practice in these areas.</p>	<p>approaches to preventing or mitigating process safety hazards. The term "effective" enables DOSH to evaluate and enforce the compliance of each facility based on the performance standard. 2. The proposal allows the employer flexibility in selecting the risk assessment method for the facility. LOPA is provided as an example of an effective method to identify the most protective safeguards. 3. The comment is noted and respectfully declined. The regulation seeks to minimize or eliminate process safety hazards. The Board refers the commenter to the responses to WSPA and API for the definition for "Major Change". 4. The regulations reference the California PELs because they offer the highest level of protection. Exposure limits are regulated under separate Title 8 regulations. 5. The comment requesting that the regulation require information prior to 1992 is noted but deemed unnecessary given the lack of relevance or reliability, and the difficulty in finding this information. 6. The employer has flexibility in determining how best to meet the requirements in the regulation. 7. Cybersecurity is beyond the scope of this proposal.</p>

Commenter	Comment	PSM Response
Energy API	New Regulations are Not Economically Justified; suggests the RAND report is flawed.	The Board acknowledges this comment. RAND used established methodology and reasonable assumptions to estimate the costs and benefits of the proposal. Expert peer review concluded in agreement with the results. Please see RAND report http://www.dof.ca.gov/Forecasting/Economics/Major_Regulations/Major_Regulations_Table/ . The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.
WSPA	SRIA: RAND Report	
	1. Incident rates were flawed.	RAND is confident in the rates used. RAND identified one caveated outlier in the data reported and addressed it directly in the report.
	2. Cost analysis implementation - RAND mischaracterized the data and used flawed methodology.	The methodology has been rigorously tested and peer reviewed and the data has been confirmed as statistically robust for the model used.
	3. Cost of major refinery incidents was miscalculated and off-based.	RAND used established methodology and reasonable assumptions to estimate the costs. Expert peer review concluded in agreement with the results.
	4. Suggestion that the accident rate was 7X lower in CCC than rest of CA.	RAND did not make this claim. The team used confidence intervals to determine that the rates were statistically significant to conclude that CCC was indeed safer by comparison but not by how much. This assertion was introduced by Turner Mason.
	5. All numbers reported should be included in the report.	All data points received from industry were used. For analytical purposes, high and low estimates were determined for cost/barrel/day for comparability and ranking purposes. As discussed in the report's methodology sections, the second highest and lowest were used for analysis, which is a standard approach for normally distributed data. The extreme high and low would have falsely pulled the distribution, but were not ignored, as suggested.

Commenter	Comment	PSM Response
		<p>Example: one refiner reported startup costs that were 100 times higher than all others were reporting for SPA/LOPA, as discussed in the report.</p>
	<p>6. Cost of a major incident was flawed.</p>	<p>The reported amount was a conservative estimate computed by RAND, particularly considering the associated structure of products that were not possible to fully capture and quantify. The intention was to relay the cost to CA at \$.40/gal versus the suggested approach (by Turner Mason) to estimate the losses for the refinery.</p>
	<p>7. Concern regarding approach to estimating the CA cost versus the rest of the US.</p>	<p>RAND had to consider the CA market in isolation given the unique blend and emissions requirements imposed by the state. The methodology used by RAND considered the importance of the delta (spike in supply/cost) when a refinery is shut down in a closed market. This was used to determine the difference in cost per gallon sold, arriving at a total loss to CA consumers. As noted, industry makes other related products (asphalt etc.) that would also be impacted by higher prices, however the analysis was isolated to gasoline for a conservative approach. Note: because the CA market is closed, the other products produced by the industry would have at worst a \$0 price impact, reinforcing the notion that RAND's estimates are the most reliable for the product at hand (gasoline) and conservative overall.</p>
	<p>8. Instructions to refiners were not clear.</p>	<p>The instructions were provided uniformly across all refiners to ensure consistency in interpretation. The assertion that the regulations were posed as being identical to the ISO in CCC is incorrect. All refiners were asked to provide their best estimates of the impact of the regulations, which they all did. Cooperation was not part of RAND's assumptions about enforcement. Refiners' data were taken at face value.</p>

Commenter	Comment	PSM Response
	9. Concerns about confidence in the data.	Statistical analysis revealed the data provided by industry clustered well, indicating strong confidence in their estimates. The Turner Mason report is also not specific about how they define their standard of “better data”. RAND is confident in the information received from the refiners and used in the analysis.
	10. The expected benefits were raised as a concern.	RAND calculated the expected benefits through the lens of savings to the CA public/consumers, which is the intent of the SRIA. Turner Mason was focused on the savings for refineries downstream relating to insurance and other aspects. RAND was charged with estimating the macroeconomic benefits to the state, which they provided in terms of changes in gas prices at the pump as a result of an incident.
	11. Suggestion to use API data.	RAND considered this and discussed it with experts (including refiners). The reporting just began within the last few years, so the data is limited, incomplete, and insufficient for any incidence rates that could be tested for statistical significance.

Responses to Oral Comments from September 15, 2016, Hearing

1.	Tom Umenhofer (WSPA)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
2.	Diane McClure (RN Kaiser) (CNA)	Written comments (CNA)	The Board refers the commenter to the responses provided to address their written comments.
3.	Shirley Toy (Nurse UC Davis)	Supports stronger rules (see CNA)	The Board refers the commenter to the responses provided to address their written comments.
4.	Anisa Cabral (RN Stockton)(CNA)	Written comments (CNA)	The Board refers the commenter to the responses provided to address their written comments.
5.	Tina Rufo (RN Kaiser)	Written comments (CNA)	The Board refers the commenter to the responses provided to address their written comments.
6.	Sarah Atienza (RN Kaiser)	Supports BlueGreen	The Board refers the commenter to the responses provided to BlueGreen Alliance.

7.	Karen Boxley Cottman (Nurse)	(CNA)	The Board refers the commenter to the responses provided to address their written comments.
8.	Liwen Mellinger (RN)	(CNA)	The Board refers the commenter to the responses provided to address their written comments.
9.	Amber Novey (Laborers International Union North)	Supports proposal	The Board acknowledges the commenter's support for the proposal.
10.	Kerry Morrison (representing Green Peace)	Supports BlueGreen	The Board refers the commenter to the responses provided to BlueGreen Alliance.
11.	Mitch Seaman, California Labor Federation	Written comments	The Board refers the commenter to the responses provided to address their written comments.
12.	Jeremy Smith (State Building and Construction Council)	Written comments (h)(2)(B) change "require" to "ensure."	The Board acknowledges the comment and modified the proposal. The Board refers the commenter to the responses provided to BlueGreen Alliance's 15-day comments.
13.	Jason Pfeifle (California Public Interest Research Group)	Supports BlueGreen	The Board refers the commenter to the responses to BlueGreen Alliance.
14.	Randy Sawyer (Contra Costa County)	Supports proposal	The Board acknowledges the commenter's support for the proposal.
15.	Mike Smith (USW)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
16.	Ron Espinoza (USW)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
17.	Greg Kerras (Community for Better Environment)	Written comments & supports BlueGreen	The Board refers the commenter to the responses to BlueGreen Alliance.
18.	Ernest Pacheco (District)	Supports BlueGreen	The Board refers the commenter to the responses to Blue Green Alliance.
19.	Jim Payne (USW)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
20.	Charlotte Brody (BlueGreen)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
21.	Josh Sonnenfeld (Sierra Club)	Supports USW, BlueGreen	The Board refers the commenter to the responses USW and BlueGreen Alliance.
22.	Donald Holmstrom (CSB)	Written comments	The Board refers the commenter to the responses provided to address their written comments.

23.	James Gillen (Torrance Refinery)	General support for proposal & written comments	The Board refers the commenter to the responses provided to address their written comments.
24.	Dr. Rania Satidaily (UCLA)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
25.	Doug Parker (Worksafe)	Supports USW, BlueGreen	The Board refers the commenter to the responses provided to address their written comments and responses to USW and BlueGreen Alliance.
26.	Jennifer Haley (Kern Oil)	Written comments	The Board refers the commenter to the responses provided to address their written comments.
27.	Pamela Vossenias, (Unite Here)	Supports USW, BlueGreen	The Board refers the commenter to the responses to USW and BlueGreen Alliance.

Summary and Response to Comments Resulting from the 15-Day Notice of Proposed Modification (February 10, 2017 - March 3, 2017):

No further modifications to the information contained in the Initial Statement of Reasons are proposed as a result of the 15-day Notice of Proposed Modifications mailed on February 10, 2017.

The Board incorporates into each and every response set forth below the following: the Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements.

Summary and Response to Written Comments Resulting from 15-Day Comment Period

Commenter	Comment	PSM Response
a. Scope and Purpose		
Labor Coalition (BlueGreen Alliance, United Steelworkers, Sierra Club, Worksafe, California Labor Federation, State Building and	4) Inconsistency with the Cal/ARP proposal in Scope and Purpose Change the sentence to read: This section contains requirements for petroleum refineries to reduce risks by preventing the risk of major incidents and eliminating or minimizing process safety hazards to which employees may be exposed. “Preventing major incidents” is consistent with the Cal/ARP proposal at Section 2762.0.2, p. 63,	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
Construction Trades Council)	Purpose: "The purpose of Program 4 is to <u>prevent major incidents</u> at petroleum refineries in order to protect the health and safety of communities and the environment." As currently proposed by DIR, the Scope and Purpose would allow the employer to reduce the risk of a major incident by 1% or 99%. This is an unclear and overly permissive Scope and Purpose, and it is in conflict with the more protective Cal/ARP language.	
c. Definitions		
Torrance Refinery Company, LLC (TORC)	The proposed definitions are overbroad, not cost-effective, and far more burdensome than equally effective alternatives.	The Board acknowledges the comment and declines to modify the proposal further in response to this comment.
Energy API	Definition: "Employee Representative. A union representative, where a union exists, or an employee-designated representative in the absence of a union <u>that is on-site and qualified for the task</u> . The term is to be construed broadly, and may include the local union, the international union, or a refinery or contract employee designated by these parties, such as the safety and health committee representative at the site." This definition still allows for individuals who are not site/company employees to be designated as employee representatives, which leads to potential risks of inappropriate disclosure of business confidential information and other sensitive information to non-employees.	The Board acknowledges this comment. Employees are entitled to select representatives of their choosing where a union exists. In the absence of a union, employee-designated representatives must be onsite and qualified for the task. Employees and employee representatives must meet the qualifications provided for under the various subsections of the proposal. See response to WSPA 45-day comment. The proposed modification does not limit an employer's rights and remedies to protect trade secrets. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
	<p>API recommends deleting “or contract” from the definition and include only individuals who regularly work at the facility and are qualified in process safety.</p>	
<p>Curtis Horn, of I&C Engineer - Carollo Engineers</p>	<p>2. (c) definition for employee representative, what makes a union qualified or unqualified?</p>	<p>The Board acknowledges this comment. In response, the Board modified the definition of Employee Representative to clarify the term relative to the absence of a union.</p>
<p>Tesoro Refining & Marketing Company LLC</p>	<p>D. Definition of Employee Representative. Tesoro believes that the definition of "employee representative" should be revised to clarify that an employee representative is a refinery employee who works at the facility and is qualified for the task in question.</p> <p>1. Justification Employee representatives are required to participate in various elements of the process safety management program. Accordingly, the definition should be clarified to ensure that only individuals who work at the facility and are qualified for their responsibilities may act as an employee representative.</p> <p>2. Proposed Revision Employee Representative - a union representative, where a union exists or an employee-designated representative in the absence of a union, that is on-site and qualified for the task. The term is to be construed broadly, and may include the local union, the international union, or a refinery employee designated by these parties, such as the safety and health committee representative at the site.</p>	<p>Employees are entitled to select representatives of their choosing where a union exists. In the absence of a union, employee-designated representatives must be onsite and qualified for the task. Employees and employee representatives must meet the qualifications provided for under the various subsections of the proposal. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Energy API	<p>Add to definition section: <u>Hierarchy of Hazard Control.</u> <u>Hazard Prevention and control</u> <u>measures, in Priority order, to</u> <u>eliminate or minimize a hazard.</u> <u>Hazard Prevention and control</u> <u>measures ranked from most</u> <u>effective to least effective are:</u> <u>First Order Inherent Safety,</u> <u>Second Order Inherent Safety, and</u> <u>Passive, active and Procedural</u> <u>Protection layers.</u></p> <p>API disagrees with the prioritization of First Order measures over all others even where others are sufficiently protective. In addition, the use of the word “effective” is problematic because it is subjective and creates regulatory uncertainty for the sites. API supports the wording below: Hierarchy of Hazard Controls Analysis (HCA) - a methodology that applies the Hierarchy of Hazard Controls for the purpose of selecting recommendations that eliminate or minimize a hazard or that reduce the risk presented by a hazard.</p>	<p>This definition is necessary to ensure that refineries evaluate and implement the most effective approaches to preventing or mitigating process safety hazards. This definition clarifies the prioritization of inherent safety measures over passive, active, and procedural safeguards. It is necessary to clarify the term since it is used throughout the regulation and requirements of the analysis are outlined in subsection (l). Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Tesoro Refining & Marketing Company LLC	<p>C. Definition of Hierarchy of Hazard Controls Analysis. Tesoro believes that this definition can be written more precisely.</p> <ol style="list-style-type: none"> 1. Justification Definitions in regulations should be precise and easily understood to enable employers to comply. 2. Proposed Revision Hierarchy of Hazard Controls Analysis (HCA) - a procedure that applies the Hierarchy of Hazard Controls for the purpose of selecting recommendations that 	

Commenter	Comment	PSM Response
	eliminate or minimize a hazard, or that reduce the risk presented by a hazard.	
Labor Coalition (BlueGreen Alliance, United Steelworkers, Sierra Club, Worksafe, California Labor Federation, State Building and Construction Trades Council)	2) Internal Inconsistency with the Definition of Highly Hazardous Material Add the following sentence to this definition: <u>This definition includes asphyxiants, such as nitrogen and carbon dioxide.</u> Asphyxiants are hazardous chemical substances that can cause death within seconds of inhalation. They are often used during partial or unplanned shutdowns, as well as during turnarounds. Because the PSM proposal covers partial or unplanned shutdowns, chemical asphyxiants should be included in the definition of Highly Hazardous Material, rather than in the definition of Utility.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.
Energy API	Major Change. Any of the following: <ul style="list-style-type: none"> • Introduction of a new process, new process equipment, or new highly hazardous material; • Any change in operational <u>change</u> outside of established safe operating limits; or, • Any alteration that introduces a new process safety hazard or worsens an existing process safety hazard. The definition remains overly broad and will require refineries to perform extensive time-consuming and labor-intensive analyses (e.g., DMR, HCA, MOC, etc.) for routine or minor equipment changes or for brief deviations from safe operating limits with no	The Board acknowledges this comment. See response to WSPA 45-day comment. The criteria listed in the definitions can impact existing processes and must be evaluated to ensure safe operation. This is necessary to clarify the type of change outside of safe operating limits that may constitute a "Major Change." Major Changes are key triggers for certain analyses under the regulation. Major Change specifically triggers requirements in Damage Mechanism Review, Hierarchy of Hazard Controls, Management of Change and Human Factors. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
	<p>indication that process safety will actually be improved.</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>A. <u>Definition of Major Change.</u> Tesoro believes that DIR should revise the definition of "major change" to clarify that the most important criterion for "major change" is the introduction of a new process safety hazard or the worsening of an existing process safety hazard. The structure of the proposed definition does not capture the importance of changes to process safety hazards in determining whether a change is "major".</p> <p>1. Justification "Major Changes" trigger damage mechanism reviews (DMRs); hierarchy of hazard controls analyses (HCAs), management of change (MOC), or analyses of human factors. Applying those processes to routine or minor equipment changes would be a disproportionate and ineffective use of a refinery's resources or might lead to a reduction in the quality of those analyses when properly applied to changes that present higher risks.</p> <p>2. Proposed Revision</p>	

Commenter	Comment	PSM Response
	<p>DIR should revise the draft CalPSM regulation to define "major change" as follows: <i>Major Change</i> - Any of the following that introduces a new process safety hazard or worsens an existing process safety hazard:</p> <ul style="list-style-type: none"> • Introduction of a new process or new highly hazardous material; • Any change in operation outside of established safe operating limits; or • Any alteration in a process or in process chemistry. 	
Energy API	<p>Definition: "Major Incident. An event within or affecting a process that causes a fire, explosion or release of a highly hazardous material and which has the potential to result in death or serious physical harm." API continues to be concerned about this overly broad definition. The ambiguity of the term "potential" extends burdensome analyses to a multitude of processes with no clear safety improvement. Adding wording such as "substantial" or "imminent" would help clarify and narrow the scope to a more realistic level. In addition, API does not support the "shelter-in-place or evacuation order" wording since such scenarios may be</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>precautionary where an actual major incident did not occur.</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>B. <u>Definition of Major Incident.</u> Tesoro believes that DIR should revise the definition of "major incident" to clarify that this classification is reserved for incidents that have the potential to result in death or serious physical harm. The definition proposed by DIR could significantly expand the scope of incidents classified as "major".</p> <p>1. Justification The classification of an event or a scenario as a "major incident" triggers safeguard protection analyses (SPAs); hierarchy of hazard controls analyses (HCAs) for major incident recommendations; and root cause investigations. Applying those processes to less serious incidents would be a disproportionate and ineffective use of a refinery's resources.</p> <p>2. Proposed Revision DIR should revise the draft CalPSM regulation to define "major incident" and include a definition for catastrophic release as follows:</p> <p><input type="checkbox"/> Major Incident - an event within or affecting a process that causes a catastrophic release that</p>	

Commenter	Comment	PSM Response
	<p>has the potential to result in death or serious physical harm.</p> <p>b. Catastrophic Release - a major uncontrolled emission, fire, or explosion, involving one or more highly hazardous materials that presents an imminent and substantial endangerment to on site employees or contractors.</p>	
<p>Energy API</p>	<p>Definition: "Process Equipment. <u>Any e-quipment, including pressure vessels, rotating equipment,</u> piping, instrumentation, <u>process</u> control, nonprocedural safeguard or appurtenance related to a process."</p> <p>API does not object to the inclusion of "pressure vessels" and "rotating equipment." However, API finds other elements of the definition to be vague and unclear. The scope of "related to a process" is ambiguous, and "appurtenance" is undefined.</p> <p>The term "process equipment" is important and is used repeatedly throughout the regulations, so its definition must be clear. API recommends deleting "non-procedural" and "appurtenance."</p>	<p>The proposed modification covers all currently used equipment and equipment that may be used in the future that could affect a process. The Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Energy API	<p>Definition: "Process. Petroleum refinery activities including use, storage, manufacturing, handling, piping or on-site movement that involve a highly hazardous material. Utilities and process equipment shall be considered part of the process if in the event of a failure or malfunction they could potentially contribute to a major incident. For purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that an incident in one vessel could affect any other vessel, shall be considered a single process. <u>This definition includes processes under partial or unplanned shutdowns. This definition excludes ancillary administrative and support functions, including office buildings, labs, warehouses, maintenance shops, and change rooms.</u>"</p> <p>API does not support the added wording that the definition "includes processes under partial or unplanned shutdowns" – such wording is redundant and unnecessary. A partial or planned shutdown does not change whether an area is considered a "process." API recommends that the highlighted language be deleted.</p>	<p>This modification is necessary to clarify that partial or unplanned shutdowns in petroleum refineries are covered if they involve a highly hazardous material. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>B. § 5189.1 (c) Definition of Process DIR has added "processes under partial or unplanned shutdowns" to the definition of "process" without defining those terms or providing a justification for the new requirement. Tesoro believes that this addition is confusing and unnecessary.</p> <p>1. Justification The addition of "processes under partial or unplanned shutdowns" to the definition for "process" is unnecessary because any processes that are shut down or partially operating are already covered by the current definition of process. There are no refinery operations that would be reclassified as a "process" because of this revision. Furthermore, "partial or unplanned shutdowns" is undefined and ambiguous.</p> <p>2. Subsection (c) Proposed Revision Delete "This definition includes processes under partial or unplanned shutdowns." from the definition of Process.</p>	
<p>Energy API</p>	<p>Definition: "Recognized and Generally Accepted Good Engineering Practices (RAGAGEP). Engineering, operation or maintenance activities established in codes, standards, technical reports or recommended practices, and published by recognized and generally accepted organizations such as the American National Standards Institute (ANSI), American Petroleum Institute (API),</p>	<p>The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. The definition for RAGAGEP includes a list of examples, but is not exclusive. The Cal/OSHA PSM Program can be more protective than</p>

Commenter	Comment	PSM Response
	<p>American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), American Society of Mechanical Engineers (ASME), American Society of Testing and Materials (ASTM), National Fire Protection Association (NFPA), and Instrument Society of America (ISA). <u>RAGAGEP does not include standards, guidelines or practices developed for internal use by the employer.</u>"</p> <p>API does not agree that standards or guidelines developed by owner/operators are not RAGAGEP. The definition fails to recognize that practices incorporated in published design codes and standards originated from the practices of individual employers - that internal standards also often form the basis of API and other industry standards. By taking away the flexibility to use internal guidelines as a source of RAGAGEP, CalPSM is essentially stifling creativity that can lead to improvements in industry standards. RAGAGEP is not a finite, static collection of engineering principles which have been completely and definitively explained in written codes and standards. Rather, codes and standards are simply a subset of all of the principles which make up RAGAGEP. The proposed definition of RAGAGEP fails to include internal standards created by on-site engineers with specific experience at the worksite in question. In other words, this</p>	<p>the Federal program. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>narrow approach fails to recognize that all “established codes, standards, published technical reports or recommended practices” originated from the individual practices of individual employers at their individual sites.</p> <p>RAGAGEP is not based on established codes, standards, etc. as asserted; codes and standards are based upon RAGAGEP. It is industry-created engineering practices that inform and shape industry-accepted standards. Certainly, codes and standards may function as RAGAGEP, but they are not the source of RAGAGEP. In short, RAGAGEP has three fundamental characteristics: (1) proven safe and effective, (2) based on science, judgment and experience and (3) is created and defined under the principles of engineering.</p> <p>Therefore, any definition of RAGAGEP must be broad enough to include all the safe engineering practices currently being utilized by industry, specifically including the internal standards formed and implemented by employers.</p> <p>API also contends that it is inappropriate to redefine RAGAGEP contrary to the federal OSHA definition. The Preamble to the Final Rule to the Federal PSM Standard states, “appropriate internal standards of a facility” were to be accepted as RAGAGEP, so the proposed definition here directly contradicts the federal rule.</p> <p>Also, note that some areas of the</p>	

Commenter	Comment	PSM Response
	CalPSM rule allow for compliance with internal practices that are more protective (removing “equally”) than RAGAGEP.	
Curtis Horn, of I&C Engineer - Carollo Engineers	3. (c) definition for RAGAGEP; ISA is International Society of Automation, correct this definition or risk losing ISA 84/99 etc as RAGAGEP, also, Modify the line added to say <u>RAGAGEP does not include standards, guidelines or practices that were developed for internal use by the employer.</u>	
Western States Petroleum Association	In addition, the Proposed Modifications present new concerns detailed in the enclosed comment matrix. Some key areas are: The Proposed Modifications exclude, without explanation, internal standards from the definition of RAGAGEP and would require that these standards be more protective than RAGAGEP, reducing operational flexibility and disincentivizing the type of innovation that CalPSM standards have traditionally sought to promote, given that they are a critical source of RAGAGEP.	
Tesoro Refining & Marketing Company LLC	Tesoro believes that DIR should recognize internal company standards that are equally or more protective than RAGAGEP as RAGAGEP. Tesoro also believes that DIR incorrectly makes a distinction between standards, guidelines, and practices with respect to RAGAGEP.	

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>A. Documented Internal Standards, Guidelines, and Practices That Are Equally or More Protective Should Be Considered RAGAGEP.</p> <p>Documented refinery internal standards, guidelines, or practices should be included as RAGAGEP as long as they are at least as protective as the codes, standards, technical reports or recommended practices published by industry associations and standards organizations.</p> <p>1. Justification</p> <p>RAGAGEP has three fundamental characteristics: 1) proven safe and effective; 2) based on science, judgment and experience; and 3) created and defined under engineering principles. Therefore, any definition of RAGAGEP must be broad enough to include safe, proven engineering practices currently being utilized by industry and should explicitly include the internal standards developed, proven, and used by petroleum refineries.</p> <p>The organizations that typically develop industry standards base their codes, standards, and practices on their members' internal standards, which were created by refinery engineers based on their experience at specific refineries. Since RAGAGEP is typically developed from the internal standards and engineering practices used by companies in the industry, refiners should have the flexibility to consider proven internal standards as well as the codes, standards, and practices</p>	

Commenter	Comment	PSM Response
	<p>developed by industry organizations.</p> <p>Furthermore, DIR should accept as RAGAGEP any documented internal guidelines and practices that have the fundamental characteristics of RAGAGEP. The distinctions between standards, guidelines, and practices vary throughout the industry, but as long as they pass the test of having been developed from engineering principles and proven safe and effective based on experience then they should be accepted as RAGAGEP. It is unreasonable for DIR to exclude internal standards in all cases, but accept "more protective" practices since it is typically standards that are documented and subjected to a more rigorous development and review process while some practices may not be documented. The same test should be applied to all refinery standards and practices and they should be accepted as RAGAGEP if they pass this three-part test:</p> <ul style="list-style-type: none"> • Documented; • Proven safe and effective; and • Based on engineering principles, experience, and judgment. <p>2. Proposed Revisions:</p> <p>a. DIR should revise the definition of RAGAGEP by deleting the sentence "RAGAGEP does not include standards, guidelines or practices developed for internal use by the employer."</p> <p>b. Wherever the phrase "more protective" occurs in the proposed</p>	

Commenter	Comment	PSM Response
	regulation, it should be replaced with "equally or more protective". a. Subsection (d)(7), (j)(2)(B), (j)(3)(A)	
Energy API	Definition: "Temporary Pipe or Equipment Repair. A temporary repair of an active or potential leak from process piping or equipment. to hydrocarbon, chemical, or high energy utility pipe or equipment due to a damage mechanism or manufacturing flaw of the pressure boundary (pipe metallurgy). This <u>definition includes active or potential leaks in utility piping or utility equipment that affect a process, and flange or valve packing leaks</u> that could result in a major incident." This definition has been significantly modified and broadened – note that this definition was originally developed with input from industry representatives who have extensive process safety management experience and knowledge. If retained, clarification is required regarding the inclusions of utility piping and utility equipment.	The definition is necessary to clarify the types of repair to utility piping and equipment that affect a process and could result in a major incident. Therefore, the Board declines to modify the proposal further in response to this comment.
d. Process Safety Information		
Energy API	Subsection (d)(3) The employer shall provide for employee participation, pursuant to subsection (q). The PSI shall be made available to all employees <u>and relevant PSI shall be made available to affected</u> employees of contractors. Information pertaining to the hazards of the process shall be effectively communicated to all	The proposed modification is intended to give employers flexibility in providing relevant PSI to affected employees of contractors, whose duties at the refinery may be unique or limited in scope and duration. Because employees of contractors may not be part of the operation of the refinery, their need for PSI may differ from

Commenter	Comment	PSM Response
	<p>affected employees.</p> <p>API supports this additional wording as long as the site is the entity that determines what process safety information is relevant.</p>	<p>employees given the nature of their work at a refinery.</p>
Energy API	<p>Subsection (d)(6)(H) Safety instrumented systems, such as interlocks and detection and suppression systems;</p> <p>API supports this proposed modification and recommends that “safety systems” be defined.</p>	<p>This is necessary to clarify that information pertaining to process equipment should not be limited to safety instrumented systems, but include all safety systems. The Board acknowledges the comment and declines to modify the proposal further in response to this comment.</p>
Curtis Horn, of I&C Engineer - Carollo Engineers	<p>4. (d)(6)(H) instead of deleting the word instrumented, use the phrase ‘Safety Instrumented Systems and/or Other Safety Systems’ in place of Safety Instrumented Systems.</p>	
Energy API	<p>Subsection (d)(7) The employer shall document that process equipment complies with RAGAGEP, where RAGAGEP has been established for that process equipment, or with other <u>equally or more protective internal practices standards</u> that ensure safe operation.</p> <p>API supports retaining the “equally or” wording for use of internal practices since such practices will provide the same level of protection. It is not clear why the internal practice has to provide <u>more</u> protection than external or public RAGAGEP.</p>	<p>The regulation gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP and to document process equipment compliance through the use of internal practices that ensure safe operation that are more protective than RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. This is necessary to ensure safe operation and establishes RAGAGEP as a baseline standard to measure process equipment compliance. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Curtis Horn, of I&C Engineer - Carollo Engineers	5. (d)(7) I recommend that any practices that a refiner uses instead of RAGAGEP be approved and documented with CalOSHA prior to use.	The Board acknowledges the comment and declines to modify the proposal further in response to this comment.
e. Process Hazard Analysis		
Energy API	<p>Subsection (e)(3)(B) Previous <u>publicly documented</u> major incidents in the petroleum refinery and petrochemical industry sectors that are relevant to the process;</p> <p>API supports this proposed modification with the stipulation that the publicly documented information be relevant to the PHA, not necessarily the process.</p>	This is necessary to clarify the types of information about major incidents that can be used in the PHA. Outcomes of previous incidents and external events provide a historical record to inform current and future safety practices. The Board acknowledges the comment and declines to modify the proposal further in response to this comment.
Curtis Horn, of I&C Engineer - Carollo Engineers	6. (e)(3)(B) consider allowing refiners to use company documented incidents in addition to publically available incidents.	
Tesoro Refining & Marketing Company LLC	Tesoro agrees that a process hazard analysis (PHA) should include a review of incident reports that have occurred at other similar facilities in the refining industry, but suggests that "publically documented" be understood to mean formal incident reports that are distributed within the industry as a result of alerts from major trade associations or the Center for Chemical Process Safety and are complete with respect to describing the circumstances of the incident and its contributing causes. DIR should clarify the meaning of "publically documented" by publishing this guidance in the FSOR.	

Commenter	Comment	PSM Response
Energy API	<p>Subsection (e)(6) The employer shall conduct an HCA <u>in a timely manner</u>, pursuant to subsection (l), for all recommendations made by a PHA team for each scenario that identifies the potential for a major incident. The employer shall append the HCA report to the PHA report.</p> <p>It is unclear what “in a timely manner” means – less ambiguity here would be helpful as long as the time provided is reasonable. The added wording would be more acceptable if it is clear that such wording does not mean a specific timeframe.</p>	<p>The modification allows the employer with flexibility to conduct an HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
f. Operating Procedures		
Labor Coalition (BlueGreen Alliance, United Steelworkers, Sierra Club, Worksafe, California Labor Federation, State Building and Construction Trades Council)	<p>1) Internal Inconsistency in Operating Procedures “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.”</p> <p>This sentence is in conflict with subsection (q)(5)(A)(3), Employee Participation, which provides explicit authority to qualified operators to “partially or completely shut-down an operation or process, based on a process safety hazard.” The sentence at (f)(5)(A) will allow a refinery employer to countermand an operator’s request to shut-down a process by asserting that the employer’s procedures are “functionally equivalent to, or safer than, shutting down or isolating the process,” and</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>therefore the process does not need to be shut-down. This sentence introduces an internal contradiction within the regulation.</p> <p>Option A: Amend the sentence as follows: “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, <u>except that this provision shall be subordinate to an operator’s request to partially or completely shut-down an operation or process, pursuant to subsection (q)(5)(A)(3).</u>”</p> <p>Option B: Strike the above sentence from (f)(5)(A) completely.</p>	
Energy API	<p>Subsection (f)(6)(D) Safety instrumented systems and their functions.</p> <p>API supports this proposed modification and recommends that “safety systems” be defined.</p>	<p>This is necessary to clarify that information pertaining to process equipment should not be limited to safety instrumented systems, but include all safety systems and their functions. The Board acknowledges the comment and declines to modify the proposal further in response to this comment.</p>
Curtis Horn, of I&C Engineer - Carollo Engineers	<p>7. (f)(6)(D) instead of deleting the word instrumented, use the phrase ‘Safety Instrumented Systems and or Other Safety Systems’ in place of Safety Instrumented Systems.</p>	
g. Training		
Energy API	<p>Subsection (g)(1)(B) Each employee involved in the maintenance of a process, and each <u>maintenance</u> employee prior to working in a newly assigned process, shall be trained in an overview of the process and in the relevant <u>hazards and safe work practices, Operating Procedures,</u> pursuant to subsection (f)(6).</p>	<p>This is necessary to clarify that this subsection addressed maintenance employees, and although maintenance employees are not involved in operations, they need to comply with safe work practices. The Board acknowledges the commenter's support of this proposed modification.</p>

Commenter	Comment	PSM Response
	API supports this proposed modification.	
h. Contractors		
Labor Coalition (BlueGreen Alliance, United Steelworkers, Sierra Club, Worksafe, California Labor Federation, State Building and Construction Trades Council)	<p>Internal Inconsistency in Contractors (h)(2) Change “require” to “ensure” for consistency within this subsection: “...and shall require <u>ensure</u> that its contractors and any subcontractors....” By using “require,” DIR is setting up a “difference” in the interpretation of this word as compared to the word “ensure,” which is used throughout the remainder of this subsection. As used throughout the subsection, “ensure” imparts a higher degree of accountability on the part of the refinery employee with regard to compliance with HSC Section 25536.7.</p>	<p>The Board acknowledges the comment. The proposed modification at subsection (h)(2)(A) is consistent with the language and requirements of HSC 25536.7. In response to the comment, the Board modified subsection (h)(2)(B), changing “require” to “ensure” to promote safety and accountability. The provision ensures that contractors and contractor employees are informed of the process safety hazards in the refinery and applicable safety procedures, including what actions to take in the event of an emergency. This requirement is necessary to ensure the safety performance of contractor employees, throughout the time when the contractor is performing work at the refinery.</p>
Energy API	<p>Subsection (h)(2)(A) When selecting a contractor, the refinery employer shall obtain and evaluate information regarding the contractor's safety performance, including programs used to prevent employee injuries and illnesses, <u>and shall require that its contractors and any subcontractors use a skilled and trained workforce Pursuant to Health and Safety Code Section 25536.7.</u> Subsection (h)(2)(B) The refinery employer shall inform the contractor, and shall ensure <u>require</u> that the contractor has informed each of its employees, of the following: 1. Potential process hazards associated with the contractor’s work; 2. Applicable</p>	<p>The proposed modification at subsection (h)(2)(A) is consistent with the language and requirements of HSC 25536.7. The proposed modification at subsection (h)(2)(B) is necessary to promote safety and accountability. The provision ensures that contractors and contractor employees are informed of the process safety hazards in the refinery and applicable safety procedures, including what actions to take in the event of an emergency. This requirement is necessary to ensure the safety performance of contractor employees, throughout the time when the contractor is performing work at the refinery. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>refinery safety rules; 3. Applicable provisions of this section, including provisions of the Emergency Action Plan, pursuant to section (p).</p> <p>For CalPSM Subsection (h)(2)(A), API recommends that this addition be removed, as Senate Bill (“SB”) 54 was not meant to be part of the PSM program and should remain a separate program. API supports the proposed modifications.</p> <p>For CalPSM subsection (h)(2)(B), these provisions place undue burden on the site by requiring it to establish a process to ensure that the contractor has properly informed each of its employees on the relevant safety issues. API believes such a role is the obligation of the contractor, not the owner/operator, so API supports retaining the original wording of “require” in this provision.</p>	
Western States Petroleum Association	The cross-reference in the Proposed Modifications to Health and Safety Code Section 25536.7 runs counter to the intent of the California Legislature and creates ambiguities that would make implementation by contractors or refiners unduly burdensome.	The proposal is consistent with the requirements of HSC 25536.7. Therefore, the Board declines to modify the proposal further in response to this comment.
Tesoro Refining & Marketing Company LLC	<p>A. Authority to Regulate Health and Safety Code Section 25536.7 does not empower DIR to implement 5854.</p> <p>1. Justification DIR does not have the authority to require employers to use a skilled and trained workforce as a part of the PSM program. Furthermore, 5854 and the PSM standard have</p>	The proposal is consistent with the requirements of HSC 25536.7. The proposal and related rulemaking documents comply with legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
	<p>different applicability criteria such that this cross-reference may significantly complicate the hiring process for contractors and subcontractors.</p> <p>2. Proposed Revision Delete references to Health and Safety Code Section 25536.7 and the requirements associated with them.</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>B. Ensuring Contractor Compliance DIR should revise the Contractors section to clarify that it is the contractor employer's responsibility to ensure that contractor employees are trained.</p> <p>1. Justification Tesoro believes that, although employers can be expected to communicate with their own employees and ensure that they are trained, it is not reasonable for DIR to require an employer to ensure that its contractors' employees are trained, etc., since employers do not have the ability to direct the training of their contractors' employees.</p> <p>2. Proposed Revision Change "ensure" to "require" in Subsection (h)(2)(B) Contractors.</p>	<p>Given the diversity of programs among refineries, contractor training that is customized for each refinery is necessary to ensure safety. The employer is responsible for ensuring the training is sufficient. This is necessary to ensure transparency and accountability. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
<p>Energy API</p>	<p>Subsection (h)(3)(A) The contractor shall ensure that <u>it meets the requirements of Health and Safety Code Section 25536.7, and that all of its employees are effectively trained, pursuant to subsection (g) and Health and Safety Code Section 25536.7, in the work practices necessary to safely perform their jobs, including:</u></p>	<p>The proposed modification at subsection (h)(3)(A) is consistent with the requirements of HSC 25536.7. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	See API comment on item CalPSM Subsection (h)(2)(A) above.	
Energy API	<p><u>Add subsection (h)(4) Nothing in this subsection shall preclude the employer from requiring a contractor or an employee of a contractor to whom information is made available under this section to enter into a confidentiality agreement prohibiting him or her from disclosing such information, as set forth in CCR Title 8, Section 5194(i).</u></p> <p>API supports these proposed modifications.</p>	This is necessary to protect employers' proprietary and confidential information. The Board acknowledges the commenter's support of this proposed modification.
i. Pre Start-Up Safety Review		
Energy API	<p>Subsection (i)(l) The employer shall perform a Pre Start-Up Safety Review (PSSR) for new processes and for modified processes if the modification necessitates a change in the PSI, pursuant to subsection (d) <u>and for partial or unplanned shutdowns</u>. The employer shall also conduct a PSSR for all turnaround work performed on a process.</p> <p>API recommends that this modified language be deleted, as it is unnecessary and confusing, given that the definition of "turnaround" already includes "partial shutdowns." It is not clear how this added wording will reduce releases. On the contrary, it will increase confusion and the administrative burden on sites.</p>	This modification is necessary to clarify the types of shutdowns requiring PSSR's. Requiring a comprehensive PSSR is necessary to ensure safety during the start-up process. This is necessary to ensure that the employer carefully assesses the function, performance, and integrity of new or modified processes during a partial or unplanned shutdown. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>A. § 5189.1 (i) Pre-Start-up Safety Review (PSSR) DIR has added a requirement to perform a PSSR for "partial or unplanned shutdowns" without defining those terms or providing a justification for the new requirement. Tesoro believes that this addition is confusing and unnecessary.</p> <p>1. Justification This requirement might be interpreted to require PSSRs for a routine "pause" in operations such as stopping feed to a process unit while maintaining recycle gas circulation. In such situations, there is no potential hazard justifying a PSSR. Furthermore, "partial or unplanned shutdowns" is undefined and ambiguous.</p> <p>2. Proposed Revision Delete "and for partial or unplanned shutdowns" from Subsection (i)(l) Pre Start-up Safety Review.</p>	<p>This modification is necessary to clarify the types of shutdowns requiring PSSR's. Requiring a comprehensive PSSR is necessary to ensure safety during the start-up process. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
<p>Energy API</p>	<p>Subsection (i)(2)(E) Training of each operating employee and maintenance employee <u>affected by the change</u> has been completed.</p> <p>API supports this proposed modification.</p>	<p>This is necessary to clarify which operating and maintenance employees receive training pursuant to the PSSR prior to the introduction of highly hazardous materials to a process. This limits the training to employees who are impacted by the change. The Board acknowledges the commenter's support of this proposed modification.</p>
<p>j. Mechanical Integrity</p>		

Commenter	Comment	PSM Response
Energy API	<p>Subsection (j)(2)(B) The frequency of inspections and tests shall be consistent with: (1) the applicable manufacturer's recommendations, or(2) RAGAGEP; or other equally or more protective <u>internal practices standards that are more protective than (1) or (2).</u> Inspections and tests shall be conducted more frequently if necessary, based on the operating experience with the process equipment.</p> <p>API supports retaining the “equally or” wording for use of internal practices since such practices will provide the same level of protection. It is not clear why the internal practice has to provide more protection.</p>	<p>The proposal gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Energy API	<p>Subsection (j)(3)(A) The employer shall correct deficiencies to ensure safe operation of process equipment. Repair methodologies shall be consistent with RAGAGEP or other equally or more protective internal <u>practices standards.</u> API supports retaining the “equally or” wording for use of internal practices since such practices will provide the same level of protection. It is not clear why the internal practice has to provide more protection</p>	<p>The proposal gives the employer flexibility to use an internal practice that is more protective than the applicable manufacturer's recommendations or RAGAGEP. Because internal practices can vary per refinery, it is necessary to ensure that refineries use best practices that have been proven as a RAGAGEP. This is necessary to ensure safe operation and establishes RAGAGEP as a baseline standard to measure repair methodologies. This is necessary to ensure that equipment deficiencies are corrected properly, using practices that are RAGAGEP or are more protective than RAGAGEP. The Cal/OSHA Process Safety Management Program can be more protective than the Federal program. Therefore, the Board declines to</p>

Commenter	Comment	PSM Response
		<p>modify the proposal further in response to this comment.</p>
<p>k. Damage Mechanism Review</p>		
<p>Energy API</p>	<p>Subsection (k)(4) A DMR shall be reviewed as part of a major change on a process for which a damage mechanism exists, prior to approval of the change. If a major change <u>may</u> will introduce a damage mechanism, a DMR shall be conducted, prior to approval of the change.</p> <p>API does not support changing “will” to “may” in this section. Such a change adds uncertainty about what change may or may not introduce a damage mechanism and seems to require the employer to assess hypothetical damage mechanisms, however unlikely, which is a poor use of resources. Additionally, this change could divert resources away from the management and mitigation of known process safety hazards. Therefore, the original wording should be retained.</p>	<p>The modification is necessary to allow the employer flexibility in determining when to conduct a DMR as part of a Major Change. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>A. Introduction of Damage Mechanisms. Tesoro believes that DIR should reverse the proposed revision found in paragraph (k)(4) of the draft CalPSM regulation which would change "will" to "may". This revision would impose an unwarranted burden by expanding the scope for DMR analyses to the realm of hypothetical changes.</p> <p>1. Justification The employer should be devoting resources to known damage mechanisms and the management and mitigation of their process safety hazards and potential consequences. The proposed revision could require the employer to assess an expanded realm of possibilities regardless of their probabilities and divert the employer from more effectively deploying available resources to mitigate risk.</p> <p>2. Subsection (k)(4) Revision The following sentence in the proposed rule should not be revised and should remain: "If a major change will introduce a damage mechanism, a DMR shall be conducted, prior to approval of the change."</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>B. Materials of Construction Tesoro believes that DIR should revise paragraph (k)(B)(C) in the draft CalPSM regulation to require "appropriate materials of construction" rather than materials that are "resistant to potential damage mechanisms."</p> <p>1. Justification The language of the draft CalPSM</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>regulation specifies a material of construction that is "resistant to potential damage mechanisms", but the term "resistant" is imprecise given that all materials are resistant to damage mechanisms to some degree and that no material of construction is perfectly resistant to all potential damage mechanisms. Rather, a refiner may determine the appropriate materials of construction by considering the types of damage mechanisms present and planning for a deterioration rate of the material in the specified service.</p> <p>2. Subsection (k)(B)(C) Proposed Revision: Tesoro recommends the following language for (k)(B)(C): "Determination that the materials of construction are appropriate considering the potential damage mechanisms."</p>	
l. Hierarchy of Hazard Controls Analysis		
Energy API	<p>Subsection (l)(2) The employer shall also conduct an HCA in a <u>timely manner</u> as follows:</p> <p>It is unclear what “in a timely manner” means. Less ambiguity here would be helpful as long as the time provided is reasonable. The added wording would be more acceptable if it is made clear that such wording does not mean a specific timeframe.</p>	<p>The modification allows the employer with flexibility to conduct an HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Curtis Horn, of I&C Engineer - Carollo Engineers	8. (l)(3) delete the words “As necessary” and replace “consult with” with “include” in the last sentence so it will read “The team shall include individuals with	<p>The modification preserves flexibility for the employer to draw on expertise as necessary. The expertise may not be needed on a continual basis. Therefore, the Board declines to</p>

Commenter	Comment	PSM Response
	<p>expertise in damage mechanisms, process chemistry and control systems.”</p>	<p>modify the proposal further in response to this comment.</p>
<p>Energy API</p>	<p>Subsection (l)(4)(D) <u>Identify, analyze, and document</u> The employer shall develop relevant protocol to ensure that relevant, publically available information on inherent safety measures and safeguards, is analyzed and documented by the team. This information shall include inherent safety measures and safeguards that have been: (1) achieved in practice by the petroleum refining industry and related industrial sectors; and (2) required or recommended for the petroleum refining industry and related industrial sectors, by a federal or state agency, or local California agency, in a regulation or report.</p> <p>API recommends that the previous language be retained with the deletion of the word “effective.” The proposed wording could be interpreted in a way that is not practical whereby the site would be required to analyze every publicly available safety measure. A level of reasonableness needs to be available for sites. In addition, this provision may have the unintended consequence of incentivizing refiners to devote their time and resources to checking administrative boxes, rather than focusing on substantive process safety priorities.</p>	<p>The modification allows the employer with flexibility to determine which publically available information on inherent safety measures and safeguards will be utilized as part of the HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Curtis Horn, of I&C Engineer - Carollo Engineers	9. (l)(4)(D) consider allowing refiners to use company proprietary information in addition to publically available information.	
Western States Petroleum Association	The proposed Process Hazard Analysis requirement to review “publicly documented” major incidents and the Hierarchy of Hazard Control Analysis requirement to identify, document, and analyze safety measures and safeguards from all “publically available information” create immense administrative burdens without adding value.	The modification allows the employer with flexibility to determine which publically available information on inherent safety measures and safeguards will be utilized as part of the PHA and HCA. It is necessary to ensure that the employer identifies, evaluates, and implements the most effective strategies when conducting an HCA. Therefore, the Board declines to modify the proposal further in response to this comment.
n. Management of Change		
Energy API	Subsection (n)(l) The employer shall develop, implement and maintain effective written MOC procedures to manage changes (except for replacements- in-kind) in process chemicals, technology, procedures, process equipment <u>and</u> or facilities. API supports this proposed modification.	The Board acknowledges the commenter's support of this proposed modification.
Energy API	Subsection (n)(2)(C) [MOC procedures shall ensure the following are addressed and documented prior to any change] ... Modifications to operating <u>and</u> <u>maintenance</u> procedures <u>or</u> <u>development of new operating and maintenance</u> procedures; API does not object to the addition of “maintenance,” but the inclusion of “new” operating and maintenance procedures is problematic. The proposed	This modification is necessary to clarify when MOC procedures are required in the development of new and modified operating and maintenance procedures. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
	<p>modification is a significant expansion of the proposed standard's MOC requirement. Including all "new" procedures is not warranted since there has not been a "change."</p>	
<p>Curtis Horn, of I&C Engineer - Carollo Engineers</p>	<p>10. (n)(3) Consider requiring a PHA update for a major change MOC.</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
<p>Energy API</p>	<p>Subsection (n)(6) Employees involved in the process, as well as maintenance workers whose job tasks will be affected by a change, shall be informed of, and effectively trained in, the change in a timely manner, prior to implementation of the change. The employer shall make the MOC documentation available to, and require effective training for, contractors and employees of contractors. For contractors and employees of contractors who are operating the process and whose job tasks will be affected by a change, the employer <u>shall make the MOC documentation available inform</u> and require effective training in the change in a timely manner, prior to implementation of the change, pursuant to subsection (h).</p> <p>API is concerned about the potential sharing of MOC documentation with contractors</p>	<p>The proposed modification does not limit an employer's rights and remedies to protect trade secrets. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>and contractor employees. Wording needs to be included to reduce the possibility of harm being incurred by unauthorized disclosure of information by contractors and their employees. API does not support the use of the phrase “in a timely manner.” It is unclear what “in a timely manner” means. Less ambiguity here would be helpful as long as the time provided is reasonable. The added wording would be more acceptable if it is made clear that such wording does not mean a specific timeframe.</p>	
o. Incident Investigation - Root Cause Analysis		
Energy API	<p>Subsection (o)(11) Investigation reports shall be provided to and upon request, reviewed with employees whose job tasks are affected by the incident. Investigation reports shall also be made available to all operating, maintenance and other personnel, including employees of contractors where applicable, whose work assignments are within the facility where the incident occurred or whose job tasks are relevant to the incident findings. Investigation reports shall be provided <u>on request</u> to employee representatives and, where applicable, contractor employee representatives.</p> <p>API supports the added wording of “upon request.” API also recommends that the regulations take additional authorized steps to prevent disclosure of other</p>	<p>This modification clarifies the conditions under which the employer must provide investigation reports to employee representatives. The Board acknowledges the comment and declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	proprietary and confidential information.	
Energy API	<p>Subsection (o)(5) The Incident Investigation Team shall implement the employer's Root Cause Analysis method to determine the initiating <u>and underlying</u> causes of the incident. The analysis shall include an assessment <u>identification</u> of management system failures, including organizational and safety culture deficiencies.</p> <p>API recommends adding “if applicable” after “management system causes.” Not all incidents necessarily have a management system failure component.</p>	<p>The modification is necessary to focus the RCA on initiating and underlying causes of incidents and identification of management system failures. The Governor's Interagency Refinery Task force report recommended statewide changes to require an RCA to be part of an incident investigation. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Curtis Horn, of I&C Engineer - Carollo Engineers	11. (o)(5) Consider requiring that the Root Cause Analysis also be RAGAGEP and approved during the PSCA.	The Board acknowledges the comment and declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>DIR should revise the draft CalPSM regulation to eliminate the time requirements for incident investigations.</p> <p>1. Justification The requirement to submit a report to the DIR within 90 days or five months of the incident is unreasonable and arbitrary given:</p> <ul style="list-style-type: none"> • the complexity of process safety incidents; • existing requirements that regulatory agencies, including DIR, participate in and approve activities associated with evidence collection and analysis; • the significant amounts of analytical work needed to identify contributing causes; and • the need to engage multiple stakeholders. <p>Investigation teams should be allowed an appropriate amount of time to conduct complete technical failure analyses and understand the root causes of significant incidents. The five-month limit could impede the ability of the investigation team to conduct a thorough analysis and incentivize the investigation team to finish on time rather than correctly identify an incident's contributing causes.</p> <p>2. Proposed Revision Tesoro requests DIR revise the draft CalPSM regulation to either 1) eliminate the deadlines for incident investigations; or 2) allow refiners to submit interim investigation reports to the DIR where complex analyses or significant amounts of analytical</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>work are needed to identify contributing causes.</p>	
<p>q. Employee Participation</p>		
<p>Western States Petroleum Association</p>	<p>This letter supplements our comments on the 15-day regulatory package and is also submitted pursuant to OSHSB’s February 10, 2017 Notice of opportunity to comment.</p> <p>WSPA is providing this additional comment to address a critical safety issue that has arisen related to the petroleum refining industry’s need to have refinery employees on-call during their rest periods. Construing a wage order containing rest break language similar to that applicable to refinery employees, a recent decision by the California Supreme Court states that, unless otherwise provided by law, non-exempt employees must be relieved of all duties during rest breaks, even the duty to remain on-call and/or carry radios. (Augustus v. ABM Security Services (2016) __ Cal.4th__ [2016</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>WL 7407328].) This may be appropriate in most industries, but it raises serious risks to the public with respect to refinery operations – a circumstance not before the Court. Refinery employees must remain alert at all times to respond to the risk of excessive pressure, excessive heat, or leaks at the plant.</p> <p>Moreover, some refinery employees are uniquely trained to address specific concerns that may arise in a refinery unit and must be in a position to be made aware of these incidents over the radio or other forms of instant communication at the time they arise. A delay in responding to such risks during a rest period could raise serious safety concerns for both employees and the surrounding community, which could require an evacuation. While interruptions during rest periods are infrequent, we believe that taking precautions to immediately address any potential issues is critical to refinery safety. We have long taken precautions to prevent such risks from occurring.</p> <p>But the Supreme Court’s new interpretation of the wage order in Augustus – which departs from the long-standing DLSE guidance allowing on-call rest periods in all industries – creates a risk in the particular case of refineries that we do not wish to take. Fortunately, Labor Code section 226.7,</p>	

Commenter	Comment	PSM Response
	<p>subdivision (e), provides that the statute governing wage orders “does not apply to an employee who is exempt from . . . rest . . . period requirements pursuant to other state laws, including but not limited to, a statute or regulation . . .” (Italics added.) It is therefore appropriate and proper for OSHSB to require on-call rest periods for refinery employees as a necessary safety measure.</p>	
<p>Western States Petroleum Association</p>	<p>(continued) Given its direct relevance to the Process Safety Management rulemaking, WSPA encourages OSHSB to include in the proposed regulations the italicized language set forth below to address this ongoing and critical safety issue related to the petroleum refining industry: <i>“To promote public and employee safety, employees shall remain vigilant to potential safety or health hazards at all times and shall be required to be on-call and carry instant communication devices during rest periods pursuant to OSHSB’s and the industry’s long-standing best practices. As such, employees shall not be relieved of the duty to carry and respond to emergencies transmitted via radios, pagers, or other forms of instant communication during said rest periods; provided that if an employee is affirmatively required to interrupt his or her rest period to respond to the needs of the employer to address a perceived safety or health hazard issue, another rest period shall be</i></p>	

Commenter	Comment	PSM Response
	<p><i>authorized and allowed reasonably promptly after the circumstances that led to the interruption have passed.”</i></p>	
<p>Energy API</p>	<p>Subsection (q)(1)(A) Effective participation by affected operating and maintenance employees and employee representatives, <u>throughout all phases, at the earliest possible point</u>, in performing PHAs, DMRs, HCAs, MOCs, Management of Organizational Change (MOOCs), Process Safety Culture Assessment (PSCAs), Incident Investigations, SPAs and PSSRs;</p> <p>API recommends deleting the proposed modification and instead use the phrase “during relevant phases.”</p> <p>While not an element of the “modifications,” API continues to be concerned about the use of the word “effective.” This word is subjective and can be interpreted in many ways. From a compliance perspective, the use of “effective” is inherently unclear and could pose legal obstacles. Regulations are supposed to be clear and easily understood by those persons directly affected by them. The use of the word “effective” does not meet this requirement. Note that the use of “effective” occurs in several places in the proposed regulations and most of these uses add ambiguity, not clarity, to the rules.</p>	<p>The modification ensures meaningful participation and decision making for affected operating and maintenance employees and employee representatives in all program teams for all analyses required in the section. The suggested change language would limit employee participation throughout the regulation and undermine the mandate for such participation outlined in the Governor's Task Force report. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Energy API	<p>Subsection (q)(1)(B) Effective participation by affected operating and maintenance employees and employee representatives, <u>throughout all phases, at the earliest possible point</u>, in the development, training, implementation and maintenance of the PSM elements required by this section.</p> <p>API comments on this proposed modification are the same as those in the item above.</p>	<p>The modification ensures meaningful participation and decision making for affected operating and maintenance employees and employee representatives in all program teams for all analyses required in the section. The suggested change language would limit employee participation throughout the regulation and undermine the mandate for such participation outlined in the Governor's Task Force report. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Energy API	<p>Subsection (q)(2) Authorized collective bargaining agents may select (i) <u>employee(s)</u> representative(s) to participate in overall PSM program development and implementation planning and (ii) employee(s) to participate in PSM teams and other activities, pursuant to this section.</p> <p>API supports this proposed modification.</p>	<p>This is necessary to clarify that participation in the overall PSM program development and implementation planning is from employees and not from representatives who may or may not be employees of the refinery. The Board acknowledges the commenter's support of this proposed modification.</p>
Energy API	<p>Subsection (q)(5) Within ninety (90) calendar days of the effective date of this section, the employer shall develop, in consultation with employee and employee representatives, <u>shall develop and a system to implement the following:</u></p> <p>(summarized)</p> <p>(A) Effective Stop Work procedures</p> <p>(B) Effective procedures to ensure the right of all employees, including employees of contractors, to anonymously report hazards.</p>	<p>The Board acknowledges the commenter's support of this proposed modification.</p>

Commenter	Comment	PSM Response
	<p>API supports this proposed modification.</p>	
<p>Energy API</p>	<p>Subsection (q)(5)(B) Effective procedures to ensure the right of all employees, including employees of contractors, to anonymously report hazards. The employer shall respond in writing within thirty (30) calendar days to written hazard reports submitted by employees, employee representatives, contractors, employees of contractors and contractor employee representatives. The employer shall prioritize and promptly respond to <u>and correct</u> reports of hazards that present the potential for death or serious physical harm.</p> <p>API supports the proposed modification to “correct” hazards that have the potential for death or serious physical harm. However, API does not support the 30 day requirement. It is arbitrary and does not necessarily improve process safety. Also, a site can’t “correct” a hazard; rather, a site can “mitigate” a hazard. This should be clarified in the final wording.</p> <p>See API’s comment above on the use of the word “effective.”</p>	<p>The Board acknowledges the commenter's support of this proposed modification to include correction of hazards. The timeline provides the employer with a flexible period of time to respond to written hazard reports. As outlined in the Governor's Task Force Report, the employer shall address and correct hazards that present the potential for death or serious physical harm, by eliminating or minimizing the hazard. The Board declines to modify the proposal further in response to this comment.</p>
<p>r. Process Safety Culture Assessment</p>		

Commenter	Comment	PSM Response
Energy API	<p>Subsection (r)(2) The employer shall conduct an effective PSCA and produce a written report within eighteen (18) months following the effective date of this section, and at least every five (5) years thereafter. <u>If the employer has conducted and documented a PSCA UQ to eighteen (18) months prior to the effective date of this section, and that PSCA includes the elements identified in this subsection, that PSCA may be used to satisfy the employer's obligation to complete an initial PSCA under this subsection.</u></p> <p>API supports this proposed modification.</p>	<p>This grandfathering provision gives the employer flexibility to use previously conducted PSCA that meet the requirements of this proposal. Refineries that currently conduct PSCAs should receive credit for being proactive. The Board acknowledges the commenter's support of this proposed modification.</p>
Energy API	<p>Subsection (r)(6) The employer, in consultation with the PSCA team, shall prioritize recommendations and implement corrective actions that will be implemented within 24 months of completion of the written report.</p> <p>In general, API supports this proposed modification but questions if a safety culture corrective action can be implemented in an arbitrary 24-month timeframe.</p>	<p>The Board acknowledges the commenter's support of this proposed modification. The 24 month timeline was established through stakeholder input and is a reasonable timeframe for implementing the requirement.</p>
Energy API	<p>Subsection (r)(7) The PSCA team shall conduct a written Interim Assessment of the implementation and effectiveness of each PSCA corrective action within three (3) years following the completion of a PSCA report. If a corrective action is found to be ineffective, the employer shall implement changes necessary to ensure</p>	<p>The modification is necessary to allow the employer flexibility to implement changes to corrective actions found to be ineffective. It also promotes safe operation at the refinery. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>effectiveness <u>in a timely manner not to exceed six (6) months.</u> API does not support a specific 6 month deadline. If a timeline is needed, it should be a requirement for a reasonable effort to accomplish within the specified timeframe and should not impose a</p>	
Western States Petroleum Association	<p>The Proposed Modifications create a prescriptive six-month timeframe for addressing ineffective corrective actions from PSCA assessments, which is insufficient and unworkable.</p>	<p>The modification gives the employer flexibility to address corrective actions within the provided timeframe. If the corrective actions are ineffective they should be addressed as soon as reasonably possible, within 6 months. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Tesoro Refining & Marketing Company LLC	<p>The employer shall be responsible for compliance with this section. c. § 5189.1 (r)(8) Process Safety Culture Assessment: The employer shall specify the management review and approval process to verify that the PSCA reports are accurate and that all PSCA reports, corrective action plans and Interim Assessments are managed in accordance with the requirements of this section.</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
Energy API	<p>Subsection (r)(9) PSCA reports, connective action plans and Interim Assessments shall be communicated and made available to employees, their representatives and participating contractors within thirty (30) sixty (60) calendar days of completion.</p> <p>API supports this proposed modification.</p>	<p>This is necessary to allow greater flexibility for employers to communicate and make available PSCA reports, corrective action plans, and Interim Assessments to employees, their representatives, and participating contractors. This ensures transparency and accountability. The Board acknowledges the commenter's support of this proposed modification.</p>
s. Human Factors		

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>Tesoro believes that DIR should not require a Human Factors assessment of all existing operating and maintenance procedures, but should allow the employer to focus on the procedures that are more likely to contribute to causing process safety events.</p> <p>1. Justification Human factors assessments should be concentrated on the modes of operation where human errors are more likely to occur such as start-up, shutdown, and other non-routine procedures. This would enable the employer to focus resources where risks are more likely to occur. However, the draft CalPSM regulation requires human factors assessments for modes of operation for which there is no evidence that human error is likely to occur.</p> <p>2. Subsection (s)(3) Proposed Revision: The employer shall assess Human Factors in new operating procedures for start-up, shutdown, and emergency shutdown, and new maintenance procedures for process equipment that is on-line, and shall revise these procedures accordingly.</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
<p>Energy API</p>	<p>Subsection (s)(6) The employer shall include an assessment of Human Factors in new <u>and revised</u> operating and maintenance procedures.</p> <p>API supports this proposed modification.</p>	<p>This is necessary to ensure the employer includes a Human Factors Assessment in revised operating and maintenance procedures. Effective procedures are necessary for both employee and process safety. The Board acknowledges the commenter's support of this proposed modification.</p>
<p>t. Management of Organizational Change</p>		

Commenter	Comment	PSM Response
Energy API	<p>Subsection (t)(2) The employer shall designate a team to conduct a MOOC assessment prior to reducing staffing levels, reducing classification levels of employee, changing shift duration, or <u>increasing employee responsibilities at or above 15%</u>. The employer shall provide for employee participation pursuant to subsection (q). The MOOC assessment is required for changes with a duration exceeding 90 calendar days affecting operations, engineering, maintenance, health and safety, or emergency response. This requirement shall also apply to employers using employees of contractors in permanent positions.</p> <p>API does not support this proposed modification. What metric or methodology will be used to measure if an employee’s responsibilities have increased by a numerical percentage – 15% in this case? This provision already uses the word “substantively” which is subjective but still is more reasonable that trying to measure work responsibilities numerically. API suggests deleting the wording proposed to be added.</p>	<p>The modification is necessary to clarify and quantify the level at which changes in employee responsibilities trigger a MOOC assessment. The 15% threshold is a recognized industry standard and is used here to provide consistency. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
<p>Tesoro Refining & Marketing Company LLC</p>	<p>Tesoro believes that the revised management of organizational change (MOOC) requirement to do a MOOC assessment prior to "increasing employee responsibilities at or above 15%" is overly prescriptive, unworkable, and unnecessary.</p> <p>1. Justification</p> <p>The employer has no established method to reasonably quantify employee responsibilities, therefore prescribing a 15% threshold for doing a MOOC assessment is vague and ambiguous and opens the door for arbitrary enforcement by the regulator. Furthermore, the development of a methodology for quantifying employee responsibilities would be extremely difficult because there are significant differences in responsibilities from position to position within the refinery. The effort required to determine a threshold for each position is unlikely to yield improvements in process safety that would justify that effort.</p> <p>Since there is a high degree of variability in the responsibilities of individual refinery positions and since quantifying responsibilities in a meaningful way would be impractical, it would be more effective to adopt an approach that calls for a MOOC to be done when an organizational change results in a substantive increase in responsibilities, where "substantive" is understood to mean an increase in job</p>	<p>The modification is necessary to clarify specific triggers for a MOOC assessment. The 15% threshold is a recognized industry standard and is used here to provide consistency. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>responsibilities that hinders employees in effectively performing their existing safety-related functions. The judgment that an increase is substantive would be made by a supervisor or manager who is familiar with the roles and responsibilities in the organization.</p> <p>2. Proposed Revision Revise subsection (t)(2) as follows: The employer shall designate a team to conduct a MOOC assessment prior to reducing staffing levels, reducing classification levels of employees, or changing shift duration, or increasing employee responsibilities substantively. The employer shall provide for employee participation pursuant to subsection (q). The MOOC assessment is required for changes with a duration exceeding 90 calendar days affecting operations, engineering, maintenance, health and safety, or emergency response. This requirement shall also apply to employers using employees of contractors in permanent positions.</p>	
Energy API	<p>Subsection (t)(5) The refinery manager or designee shall certify <u>based on information and belief formed after reasonable inquiry</u> that the MOOC assessment is accurate and that the proposed organizational change meets the requirements of this subsection.</p> <p>Rather than attempting to increase the personal liability for the “stationary source manager”, API recommends the following</p>	<p>This is necessary to provide a standard by which a refinery manager or their designee is required to certify the MOOC assessment. The modification is necessary to ensure accountability and transparency. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	wording: “The stationary source shall specify the management review and approval process to verify the MOOC assessment, based on information and belief formed after reasonable inquiry, is accurate"	
Tesoro Refining & Marketing Company LLC	The draft CalPSM regulation should be revised to eliminate references to the Refinery Manager in Sections: a. § 5189.1 (t)(5) Management of Organizational Change: The employer shall specify the management review and approval process to verify that the MOOC assessment is accurate and that the proposed organizational change meets the requirements of this subsection.	
v. Process Safety Management Program		
Energy API	Subsection (v)(1) The <u>employer shall designate the refinery manager as the person with authority and responsibility</u> shall be responsible for compliance with this section. API does not agree that the refinery manager has to be the sole person responsible for compliance with the CalPSM and CalARP regulations. No information is provided for the basis for this requirement. In fact, this provision may in fact decrease effective accountability where qualified individuals will be discouraged from accepting a role as “stationary source manager” based on a regulatory and legal responsibility that is	The modification is necessary to clarify that the employer is required to designate the refinery manager as the person with authority and responsibility for all aspects of PSM, which ensures accountability and transparency. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.

Commenter	Comment	PSM Response
	disproportionate to the reality of managing an effective facility.	
Tesoro Refining & Marketing Company LLC	<p>The Draft CalPSM regulation May Not Assign Specific Responsibilities or Duties to Specific Positions in a Refinery. DIR should remove references to the position of refinery manager that would assign to a specific individual the responsibility for certification of a PSM element or for a refinery's overall PSM compliance.</p> <p>1. Justification</p> <p>The California Occupational Safety and Health Act applies exclusively to "employers" (Cal. Lab. Code § 6304.5) and the statute does not contemplate assigning responsibility for compliance with its provisions to individual employees.</p> <p>Furthermore, many PSM elements require complex analyses that are done collaboratively by multi-disciplinary teams. This collaboration is generally beneficial since PSM requires inputs from diverse disciplines and team members with specialized knowledge. Therefore, it is unrealistic and unreasonable for the DIR to arbitrarily assign responsibility to a single position in the facility given the extent of collaboration required to implement the rule. Such a complex and multifaceted program is more appropriately divided among a broad team composed of</p>	<p>The modification is necessary to clarify that the employer is required to designate the refinery manager as the person with authority and responsibility for all aspects of PSM, which ensures accountability and transparency. The Board believes that the proposal and related rulemaking documents comply with statutory and legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>members with relevant skills and individual responsibilities. This responsibility properly belongs to the employer.</p> <p>The recent revisions to this provision proposed by DIR do not resolve this concern. Merely revising the draft CalPSM regulation to state that "the employer shall designate the refinery manager as the person ... " [Subsection (v)(1), emphasis added] does not change the fact that responsibility for compliance has been directed to a specific employee. Regardless of whether the State of California specifies the refinery manager itself, or whether the State requires the employer to specify the refinery manager, it is contrary to California Labor Code § 6304.5 for the draft CalPSM regulation to shift responsibility for compliance from the employer to a specific employee.</p>	
x. Implementation		
Energy API	<p>Subsection (x)(6) Each recommendation that is changed or rejected by the employer shall be <u>communicated to onsite</u> made available to team members for comment <u>and made available to offsite team members for comment</u>. The employer shall document all written comments received from team members for each changed or rejected recommendation. The employer shall document a final decision for each recommendation and shall <u>communicate it to onsite team members and make it available to offsite</u> team members.</p>	<p>The proposed modification is intended to give employers flexibility in communicating changes to recommendations. This ensures that each team member is aware of, and able to comment on, any recommendation that the employer has elected to change or reject. This ensures transparency and accountability in addressing team recommendations. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
	<p>API supports sharing recommendations that are changed or rejected with onsite team members only. API does not support sharing that same information offsite. API also does not support taking comments on changed or rejected recommendations. Such a step could lead to ongoing deliberations and discussions that could divert resources from other site activities.</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>Tesoro believes that there is no meaningful distinction between on-site and off-site team members and, therefore, no justification for DIR to make up distinct communication requirements for team members based on their location. DIR should delete the proposed revisions. Furthermore, it is often impractical to maintain the team over the course of implementing recommendations. When recommendations do need to be changed or rejected due to infeasibility or the discovery of superior options, it should be sufficient to make the changes available to team members. Subsection (x)(6) should be revised as follows: Each recommendation that is changed or rejected by the employer shall be made available to all team members for comment.</p>	<p>The proposed modification is intended to give employers flexibility in communicating changes to recommendations. This ensures that each team member is aware of, and able to comment on, any recommendation that the employer has elected to change or reject. This ensures transparency and accountability in addressing team recommendations. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Commenter	Comment	PSM Response
Energy API	<p>Subsection (x)(II) Each corrective action from a Compliance Audit shall be completed within eighteen (18) months after completion of the audit , unless the employer demonstrates in writing that it is infeasible to do so. Each corrective action from an incident investigation shall be completed within eighteen (18) months after completion of the investigation, <u>unless the employer demonstrates in writing that it is infeasible to do so.</u></p> <p>API support this proposed modification.</p>	<p>This is necessary to allow the employer limited flexibility to demonstrate in writing the circumstances and rationale that make it infeasible to meet the prescribed time limits for completion of corrective actions resulting from an incident investigation. The Board acknowledges the commenter's support of this proposed modification.</p>

Responses to General Comments from 15-day Comment Period

Commenter	Comment	PSM Response
Curtis Horn, of I&C Engineer - Carollo Engineers	<p>1. The regulations do not point to implementation guidance, with the loss of company procedures something will need to be used, consider developing implementation guidance for the state refiners.</p>	<p>The Board acknowledges the comment and declines to modify the proposal further in response to this comment.</p>
Torrance Refinery Company, LLC (TORC)	<p>See comments submitted previously: Western States Petroleum Association (WSPA), March 3, 2017; TORC's and WSPA's September 15, 2016 comments; TORC's and WSPA's July 15, 2016 comments;</p>	<p>Refer to responses to these submitted comments.</p>
Torrance Refinery Company, LLC (TORC)	<p>OHSB fails to consider equally effective and less burdensome alternatives for costly proposed regulations that create little or no benefit.</p>	<p>The Board acknowledges the comment and declines to modify the proposal further in response to this comment. DOSH has conducted an extensive economic analysis and considered alternatives to the proposal.</p>
Torrance Refinery Company, LLC (TORC)	<p>The proposed regulations create unnecessarily prescriptive standards that remove flexibility needed to ensure safety and minimize accidental releases.</p>	<p>The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.</p>

<p>Torrance Refinery Company, LLC (TORC)</p>	<p>The proposed regulations appear to go beyond OES' authority to regulate facilities and fail to harmonize with the proposed CalPSM regulations that regulate employers, not employees.</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
<p>Western States Petroleum Association</p>	<p>OSHSB provided for 15-day public comment on the Proposed Modifications by "Notice of Proposed Modification", dated February 10, 2017. In response, we enclose "WSPA Comments on 15-day Modifications to Proposed Title 8: Section 5189.1 of the General Industry Safety Orders, Process Safety Management for Petroleum Refineries Regulations". This matrix requests both changes in the regulatory language and guidance/clarifications in the Final Statement of Reasons (FSOR). While the matrix specifically addresses OSHSB's February 10, 2017 "Notice of Proposed Modification", we restate, and incorporate herein by reference, the WSPA comments on Proposed CalPSM Section 5189.1 provided in our September 2016 comment matrix. Since this document is in the administrative record, we are not providing an additional copy with this letter. For reference, some of the issues raised in WSPA's previous comments that do not appear to be addressed by the Proposed Modifications.</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

Western States Petroleum Association	OSHSB continues, in many respects, to overstep the statutory bounds of its authority, and seeks to regulate processes and parties outside the scope of permissible regulation under California statutes.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment. The Board believes that the initial proposed text and related rulemaking documents comply with legal requirements.
Western States Petroleum Association	OSHSB continues, in many instances, to include vague, inaccurate and inconsistent definitions, including, for example, “major change” and “major incident”, that, if left uncorrected, would trigger significant and burdensome operational requirements with little to no benefit in actually enhancing safety (or, worse yet, even having a negative impact on safety).	The Board acknowledges this comment but declines to modify the proposal further in response to this comment. The Board believes that the initial proposed text and related rulemaking documents comply with legal requirements. DIR has conducted an extensive economic analysis. Please see RAND report http://www.dof.ca.gov/Forecasting/Economics/Major_Regulations/Major_Regulations_Table/
Western States Petroleum Association	The Proposed Modifications do not tailor applicability of Proposed CalPSM Section 5189.1 to ensure coverage of only that refinery equipment and those activities that can reasonably be expected to impact worker safety.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.
Western States Petroleum Association	The Proposed Modifications change, but do not remove, the attempt to assign personal responsibility to the refinery manager for all CalPSM compliance activities.	The modification is necessary to ensure accountability and transparency. Therefore, the Board declines to modify the proposal further in response to this comment.
Western States Petroleum Association	There continue to be inconsistencies, duplication and lack of coordination between Proposed CalPSM Section 5189.1 and the amendments currently being proposed by the California Governor’s Office of Emergency Services to the California Accidental Release Prevention (CalARP) Program for petroleum refineries.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.

Western States Petroleum Association	OSHSB continues its failure to adequately explain the rationale for Proposed CalPSM Section 5189.1, why many provisions are significantly different and/or more burdensome than the corresponding federal OSHA standards, and why less costly and less burdensome alternatives were not considered and/or proposed.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment. The Board believes that the initial proposed text and related rulemaking documents comply with legal requirements.
Western States Petroleum Association	OSHSB continues its failure to adequately explain the use of prescriptive standards in Proposed CalPSM Section 5189.1 and why less burdensome and more cost-effective alternatives such as performance standards are not preferable. One way for OSHSB to at least partially address the concerns expressed in our comments would be to explain in the FSOR the intended meaning of terms and why those concerns will not be realized when the rules are implemented in practice.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment. The Board believes that the initial proposed text and related rulemaking documents comply with legal requirements. The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.
Western States Petroleum Association	While OSHSB addressed "grandfathering" in some instances, Proposed CalPSM Section 5189.1 needs to include additional "grandfather" provisions to account for refiners whose procedures already meet the proposed requirements, and to allow for reasonable implementation timing that recognizes a refinery's need to meet existing federal and CUPA requirements and to transition to new CalPSM and CalARP requirements.	The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment. The Board believes that the initial proposed text and related rulemaking documents comply with legal requirements. The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.
Western States Petroleum Association	Proposed CalPSM Section 5189.1 fails to adequately protect and safeguard potentially confidential, proprietary, and security sensitive business information that it requires refineries furnish. Public availability	The proposal does not limit an employer's rights and remedies to protect trade secrets. Therefore, the Board declines to modify the proposal further in response to this comment.

	<p>or disclosure of this required information could result in significant security consequences to the company, facility, and community.</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>Tesoro believes that DIR lacks the authority to make some of the proposed revisions to the subsection on contractors. Tesoro also believes that some of these revisions would require the employer to exert more control over the contractor workforce than is practical, desirable, or warranted.</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. The proposal and related rulemaking documents comply with legal requirements. Therefore, the Board declines to modify the proposal further in response to this comment.</p>
<p>Chemical Industry Council of California</p>	<p><u>Process for any Future Additions</u></p> <p>Should consideration be given to extension of these standards beyond the refining industry, we note that the mechanisms by which this could be done seem to differ between the PMS and CalARP proposals. In either case, though, we strongly urge that any consideration given in the future to incorporation of any additional types of facilities under the new PSM standards and/or the new CalARP provisions, be undertaken only after a deliberate and inclusive process to shape their application to the facilities and processes for which they are being considered. Those almost certainly will be very distinct from the refineries for which these amendments were designed.</p> <p>It is essential to understand that the chemical industry in California is a specialty industry rather than commodity industry. Individual chemistries and aspects of facilities and processes that are unique must be taken into account. This includes</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

	<p>the reality that processes relied upon in such facilities are often trade-secret protected sources of competitive advantage. More still are tailored to unique applications of chemistries, and simply not readily amendable to regulations borne of commodity processes.</p>	
<p>Chemical Industry Council of California</p>	<p>(continued) It would seem, therefore, that any initiative to draw any non-refining facilities into this standard would require a similarly new section or, at the very least, a substantial amendment of the proposed section 5189.1. It would therefore be our recommendation that the Board, in any final action ratifying this proposed new standard, respect the significance of any potential future expansion by incorporating a resolution reflecting the following:</p> <p><i>Should consideration be given at some point to extension of standards promulgated under section 5189.1 to include any facilities beyond the refining industry, a consultative process shall be initiated to include key stakeholders directly involved</i></p>	

	<p><i>with the subject facilities and processes. This should ensure that the provisions of this article that would be applicable thereto are tailored to be responsive to and respectful of their unique circumstances and other aspects that would operationally differentiate them from petroleum refining.</i></p> <p>In parallel consideration, with respect to the proposed CalARP standard we note that a new “Program 4” has been created as the vehicle to house the proposed changes. It would seem a potentially easier task to add new facilities to this standard, simply by expanding its coverage. While it could be envisioned that that would be a simple matter, we would submit that non-refining chemical facilities are going to be sufficiently different that such a simple solution would be ill-advised. To that end, we strongly urge that a commitment parallel to the one above be added to Section 2762, to read:</p> <p><i>2762.0.1.1 Should consideration be given at some point to extension of Program 4 to include any facilities beyond the refining industry, a consultative process shall be initiated to include key stakeholders directly involved with the subject facilities and processes, This should ensure that the provisions of this article that would be applicable thereto are tailored to be responsive to and respectful of their unique circumstances and other aspects that would operationally differentiate them from petroleum refining.</i></p>	
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<p>Chemical Industry Council of California</p>	<p><u>Concerns regarding linkage of “Hierarchy of Hazard Control” and “Inherent Safety”</u></p> <p>The language defining “Hierarchy of Hazard Control” and “Inherent Safety” appears in both the proposed PSM and CalARP standards. We regard these as having very significant implications. Each has its own context, and clearly notions at the heart of these have been evolving within industry as they have evolved among stakeholders outside of the industry. The linkage of the two concepts <u>as they have been defined in these proposals</u>, however, seems to raise particularly concerning implications.</p> <p>In contrast to the objective engineering considerations at the core of our highly-evolved disciplines around risk assessment and risk management, the definitions of inherent safety, in particular, seem dominantly subjective. Important considerations, to be sure, but they should be framed in an additive sense within the larger risk calculus. Likewise the notion of a hierarchy of hazard control is not foreign to our companies, particularly those dealing with some of the most hazardous of chemicals. As drafted, however, these concepts of a “Hierarchy” and “Inherent Safety” are linked, essentially, as a closed system - closed in a way that seems to deny legitimacy to consideration of “risk.” In the handling of hazardous chemicals (most of which are “hazardous” because of reactive properties that are at the very core of their value to</p>	<p>The Board acknowledges the comment and declines to modify the proposal further in response to this comment.</p>
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	<p>the society), management of risk has been a core discipline. It is highly developed and essential to the ultimate safety of operations.</p> <p>We would strongly urge that both the “closed loop” linkage of these definitions and, indeed, the definitions themselves, be reconsidered in this express context.</p>	
<p>Chemical Industry Council of California</p>	<p><u>Concerns about the placement of the CalARP definitions of the “Hierarchy” and “Inherent Safety”</u></p> <p>It is significant – and in our minds, appropriate - that in the PSM Standard, the definitions of both the “Hierarchy” and “Inherent Safety” are incorporated <u>within</u> the new regulatory section dedicated to the refining industry, with which they have been negotiated.</p> <p>In contrast, however, the CalARP proposal positions the two definitions in the primary “Definitions” section of the regulation, applicable not just to the Program 4 area occupied by the refineries, but potentially to <u>all the Program areas</u>. While this does not “operationalize” these until they are addressed in some manner within a particular program area, the positioning of these definitions can be interpreted as a declaration of intent to ultimately apply them more broadly.</p> <p>For the reasons discussed above, we have serious reservations about this</p>	<p>The Board acknowledges this comment but it does not address the modifications to the PSM proposal. Therefore, the Board declines to modify the proposal further in response to this comment.</p>

	<p>and strongly urge that these definitions be moved from Section 2735.3, to parallel the PSM standard and incorporate them directly within the refinery section that is the object of this exercise. That would not preclude their ultimate incorporation into other areas, but it does reflect more honestly that dialogue about their drafting and inclusion has not yet been informed by broad engagement within the community of entities subject to CalARP. This repositioning could be accomplished by relocating these definitions to a new Section 2762.0.3 on “Definitions” within Article 6.5, with a preamble to the effect that:</p> <p><i>2762.0.3 Within the context of this Article, the following definitions apply:</i></p> <ul style="list-style-type: none"><i>(a) Hierarchy of Hazard Control...</i><i>(b) Inherent Safety...</i>	
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<p>Tesoro Refining & Marketing Company LLC</p>	<p>The draft CalPSM regulation should include "grandfather" clauses and reasonable implementation timing provisions for the new process safety management elements and new requirements on previously uncovered processes.</p> <p>1. Justification</p> <p>Refiners are currently meeting requirements for existing PSM elements such as PHAs, SPAs, HCAs for major projects, PSI, and employee participation, but the draft CalPSM regulation includes new requirements for the timing and content of these analyses. The draft CalPSM regulation should be revised in several ways to account for analyses that were conducted prior to its implementation. First, timing requirements for these analyses should be based on the timing of the most recent similar analyses conducted by the refinery. Second, the draft CalPSM regulation should allow projects and analyses that are begun under one regulatory regime to continue to completion without being subject to a new regulatory regime if the rule is finalized before the work is complete.</p> <p>For example, process plant changes that meet the definition of "major change" will have longer schedules, larger scopes of work, and MOC/PHA review requirements. If the PSM rule is finalized before a major project is completed, but after the project's MOC/PHA has been completed then the new HCA review requirement should not be required for the project. Imposing a new requirement on an existing project or process would be disruptive and</p>	<p>The Board acknowledges this comment but it does not address the modifications to the initial proposal contained in the 15-Day Notice. Therefore, the Board declines to modify the proposal further in response to this comment. The proposal is a performance based standard that allows for flexibility through implementation, promotes safety, and aligns with the mandate of the Governor's Task Force Report.</p>
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	<p>would likely turn into a duplicative paper exercise that would not improve process safety. Due to the number of projects in process in a refinery at any given time, re-evaluating changes for which an MOC/PHA has already been performed would create a significant burden on the refinery.</p> <p>Finally, the draft CalPSM regulation includes requirements for processes that were not previously covered. Without a grandfather clause, all of those newly covered processes would immediately become out-of-compliance. For example, the PSI element requires the extensive documentation of process technology, physical data, corrosion data, materials of construction, relief valve design, operating limits, RAGAGEP for process equipment, etc. which will require time and resources to assemble. It would be unreasonable to expect newly covered units to comply with this PSI requirement immediately (and it is unlikely to make to make the operation of the newly covered unit any safer).</p> <p>2. Proposed Revision (comment continues)</p>	
<p>Tesoro Refining & Marketing Company LLC</p>	<p>(continued) DIR should revise the draft CalPSM regulation to include a grandfather clause and reasonable implementation timing provisions for new PSM elements regarding projects that meet the "major change" criteria and are past their design phase and into the execution phase of schedule. A grandfather clause is also needed for PSI, PHAs, employee participation, etc. If the final rule does include specific limits on the duration of</p>	

	implementation schedules for corrective actions, then the limits contained in the rule should apply only to corrective actions that are recommended after the date on which the rule becomes final.	
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ADDITIONAL DOCUMENTS RELIED UPON

None.

ADDITIONAL DOCUMENTS INCORPORATED BY REFERENCE

None.

DETERMINATION OF MANDATE

These standards do not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES DETERMINATION

The Board invited interested persons to present statements or arguments regarding alternatives to the proposed standards. No alternative considered by the Board would be (1) more effective in carrying out the purpose for which the action is proposed; or (2) would be as effective as and less burdensome to affected private persons than the adopted action, or (3) would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law. Board staff were unable to come up with any alternatives or no alternatives were proposed by the public that would have the same desired regulatory effect.