



California LABOR Federation

Date: September 2, 2016

To: California Occupational Safety and Health Standards Board
2520 Venture Oaks Way, Suite 350
Sacramento, California 95833
Submitted electronically to oshsb@dir.ca.gov

From: The BlueGreen Alliance, the California Labor Federation and the United Steelworkers

Re: Comments on California's Proposed §5189.1 Process Safety Management for Petroleum Refineries.

CCR Title 8, Division 1, Chapter 4; Subchapter 7. General Industry Safety Orders; Group 16. Control of Hazardous Substances; Article 109. Hazardous Substances and Processes.

Dear Chairman Thomas and Members of the Board:

The United Steelworkers, the California Labor Federation and the BlueGreen Alliance are grateful to the Board for committing your time and expertise to ensuring that California's groundbreaking Process Safety Management (PSM) rule is meaningful, practical and legally enforceable. We believe that, with the changes we are recommending, the proposed rule could meet this objective, and that when enforced by Cal/OSHA's PSM Unit, it will have a direct effect in preventing the explosions, fires and chemical leaks that are occurring in the state's refineries.

The California Labor Federation is made up of more than 1,200 AFL-CIO and Change to Win unions, representing 2.1 million union members in manufacturing, retail, construction, hospitality, public sector, health care, entertainment and other industries. The United Steelworkers (USW) represents 850,000 workers in North America employed in oil refining, metals, rubber,

chemicals, paper, oil and the service and public sectors. The BlueGreen Alliance unites America's largest labor unions and its most influential environmental organizations with a combined national membership of 16 million members and supporters. The BlueGreen Alliance is working to solve today's most intractable environmental challenges in ways that create and maintain quality jobs and a stronger, fairer economy.

Along with this document, BGA, USW and the California Labor Federation have attached two separate documents: (1) our detailed text change requests and the rationale for each change, and (2) the text of the proposed PSM regulation with our recommendations indicated in "track changes."

As you know, these regulations are a direct result of the events at the Chevron, Richmond refinery four years ago, when an 8-inch diameter pipe carrying flammable liquids catastrophically failed, releasing a vapor cloud that engulfed 19 workers as it quickly expanded 100 yards in all directions. Ninety seconds later, the vapor cloud ignited, creating a fireball and a column of smoke that spread over the northeastern Bay Area. During that 90-second window, each of the 19 workers – with the exception of one – reached safety by crawling through a blinding atmosphere of flammable vapor. The last worker, a Chevron firefighter, stepped into the cab of his engine moments before the flames rolled over it; he survived (thanks to well-designed protective equipment) by later running through the fire to safety.

In the following days, some 15,000 people in the neighborhoods surrounding the plant sought medical attention for symptoms related to smoke exposure. The following month, Governor Jerry Brown responded by setting up an Interagency Task Force that called for top-to-bottom changes to the state's refinery PSM regulations. If the proposal is strengthened, we believe it will provide that top to bottom change and will make a significant contribution to process safety in California and the nation.

Beyond the events in Richmond, process safety traces its roots to the December 1984 industrial disaster in Bhopal, India, where a late-night leak of methyl isocyanate at the U.S.-owned Union Carbide pesticide manufacturing plant caused the deaths – mostly in their sleep – of some 20,000 men, women and children. Like other governments worldwide, the U.S. Congress subsequently passed legislation calling on OSHA and EPA to promulgate federal Process Safety Management (PSM) and Risk Management Plan (RMP) regulations, respectively. California adopted its own PSM standard in 1992 that is essentially identical to the federal standard.

Twenty-four years later, it is clear that the PSM and RMP regulations are inadequate. About 150 significant industrial chemical releases continue to occur

each year in the U.S., or about one every 2.4 days. These disasters – some of which occur in California – kill and injure plant employees and contractors and endanger the lives of nearby residents. Over 22 million Americans live within one mile of an industrial facility that handles large quantities of hazardous chemicals; the great majority of these residents are people of color.

In testifying before the U.S. Senate Subcommittee on Employment and Workplace Safety in June 2010, Deputy Assistant Secretary of Labor Jordan Barab stated:

“In the last five years alone, OSHA has counted over 20 serious incidents, many resulting in deaths and injuries in refineries across the country. The Tesoro Anacortes explosion in Washington State that killed seven workers last April was one of these. What do all of these incidents have in common? None resulted from unique technical causes. Each one repeated a lesson that should already have been learned by the industry. This cycle of workers being hurt or killed because their employers failed to implement well-known safety measures points out major deficiencies in chemical process safety management in the nation's refineries and, quite possibly, to systemic safety and health problems in the entire petrochemical industry.”

With the changes we are recommending, we believe California’s PSM proposal could substantially improve refinery safety in California and could serve as a best practice proof-of-concept for the U.S. We believe the PSM proposal has the potential to substantially improve the lives of refinery workers, contractor employees and nearby residents.

For this reason, many of us committed our organization’s resources in participating in the development of the PSM proposal. We worked with UC Berkeley’s Labor Occupational Health Program (LOHP) to help launch the Refinery Action Collaborative following the August 2012 fire at the Richmond, Chevron refinery; we submitted comments to the Governor’s Working Group on Refinery Safety; we participated in DIR’s PSM Labor-Management Advisory Committee; we submitted comments on each iteration of the proposed regulation; and we participated in several conference calls convened by DIR Director Christine Baker.

Between September 2015 and July 2016, however, we were all surprised to find that DIR had introduced a number of changes to the PSM proposal behind closed doors, without seeking the involvement of the USW, the BlueGreen Alliance or any of the union members of the California Labor Federation. While some of DIR’s changes help clarify the text – and a few even strengthen it – the majority remove regulatory requirements or introduce ambiguities that could allow

refinery managers to avoid implementing key elements of the regulation – elements that were specifically called for by the 2014 report of the Governor’s Working Group on Refinery Safety.

We will be happy to provide you with a track-change version of the July 2016 draft showing all changes introduced by DIR since September 2015.

For example, the Governor’s report specifically calls on DIR to implement regulatory changes that would require refineries to “implement inherently safer systems to the greatest extent feasible,” and yet the July text removes a six-month time limit from the September draft by which a refinery would be required to evaluate inherent safety solutions to the most serious hazards identified in a Process Hazard Analysis, or PHA. Without a time limit, the inherent safety requirement is less effective and less enforceable; the refinery would be under no obligation to complete the analysis by a date certain.

As a consequence, most refineries could continue doing what they’ve done for many years: rely on employee procedures and alarms to respond to hazards identified in the PHA, rather than implementing inherently safer, sound engineering practices called for in the Governor’s Report.

Like other changes that appear in the July draft, this small change could undercut the effect the regulations will have in preventing the leaks, fires and explosions that are occurring in California’s refineries.

DIR introduced similar 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, thermal-related weaknesses and other damage mechanisms in their pipes and equipment. The Chevron fire, for example, was caused by a pipe that catastrophically failed due to sulfidation corrosion, a well-recognized damage mechanism in U.S. refineries. In the proposal before you, DIR turned the September 2015 requirement that refineries conduct a DMR in the wake of a major fire, explosion or loss of containment into a recommendation that a DMR be done:

September 2015 draft: If a DMR has not been performed on the processes that are relevant to the investigation, a DMR shall be completed as part of the incident investigation.

July 2016 draft: If a DMR has not been performed on the processes that are relevant to the investigation, the incident investigation team shall recommend that a DMR be conducted and completed within a specified timeframe.

DIR's July language turns an enforceable regulatory requirement into a recommendation, which the refinery can choose to implement or ignore. This contradicts the recommendations of the Governor's report, which quotes a U.S. Chemical Safety Board finding of the Chevron incident that "piping circuit inspections should have included 'appropriate damage mechanisms using a standardized methodology and documentation system.'"

Similarly, in the Process Safety Information section, DIR deleted language from the September 2015 proposal that 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 in place. Some refineries apply these repairs as temporary measures in lieu of replacing sections of pipe, and some leave them in place for years, adding more temporary repairs as the pipe materials degrade over time. At some point, the pipe itself can fail, as occurred at Chevron, Richmond. Pipe repairs are therefore an important process safety indicator, something that shows how much or how little a refinery is investing in maintaining its infrastructure.

We are surprised that DIR has chosen to delete the leak seal repair reporting requirement from the Process Safety Information subsection, thereby concealing this information from employees and regulators and reducing accountability for this aspect of process safety on the part of refinery managers.

In the Implementation subsection, DIR has inserted language that allows the refinery to reject or alter the safety recommendations made by labor-management PSM teams (consisting of subject matter experts), without directly informing the team members about the employer's decision. Where the employer in the September 2015 draft was required to directly communicate this information to each team member, the employer is now only required to "make the information available," thereby reducing management's accountability to the PSM teams. We do not understand why DIR would introduce language that undermines effective communication and accountability between the refinery management and subject matter experts in the plant.

Finally, we are surprised by DIR's decision to weaken certain aspects of the PSM proposal in light of the findings of the RAND Corporation's 2016 economic analysis, which concluded that the PSM proposal – before DIR made the changes in the July 2016 draft – would significantly benefit the industry as well as the California economy, in addition to protecting the lives and health of workers and residents.

RAND concluded that on average, a single major incident costs a California refinery about \$220 million, which "is a cost that could be avoided if the proposed regulations are implemented and do, as intended, improve refinery and worker safety." RAND's estimate for all refineries statewide to maintain

compliance with the proposed PSM regulations ranged from \$20 million per year to \$183 million, with a best estimate of \$58 million per year, well below the \$220 million cost of a major incident. RAND concluded that the regulations would need to reduce a refinery's risk of a major incident by only 7.3% to be economically justified.

For the public, RAND found that the 2015 ExxonMobil explosion in Torrance cost California drivers nearly \$2.4 billion in the form of a "prolonged \$0.40 increase in gasoline prices," and that the lost fuel supply associated with this single incident reduced the size of the California economy by \$6.9 billion in the first six months following the explosion. The ExxonMobil refinery was offline for a total of 14 months. When RAND spread the \$58 million cost of the proposed PSM regulations for the refineries over the average annual California gasoline consumption of 14.5 billion gallons, the resulting increase in gasoline prices was about \$0.004 per gallon, or 4/10 of a cent.

Based on RAND's economic analysis alone, let alone implications for worker safety, we find no justification for weakening any element of the PSM proposal; if anything, the proposal should be further strengthened to provide even greater protection against the potential for another major incident in one of the state's refineries.

Our attached recommendations correct several of the changes introduced by DIR in the July draft. Some of our recommendations simply re-invoke the September 2015 language; overall, we believe our recommendations will result in a regulatory proposal that more closely meets what the Governor's Working Group on Refinery Safety called for in its 2014 report.

The Standards Board has a once-in-a-generation opportunity to reshape the state's refinery safety regulations. We strongly urge you to adopt the changes that the USW, BGA and the California Labor Federation recommend in the attached documents. Thank you for your consideration of these comments.