

## MAJOR REGULATIONS STANDARDIZED REGULATORY IMPACT ASSESSMENT SUMMARY

DF-131 (NEW 11/13)

### STANDARDIZED REGULATORY IMPACT ASSESSMENT SUMMARY

Agency (Department) Name Department of Industrial Relations and Governor's Office of Emergency Services	Contact Person Christine Baker, Director	Mailing Address 1515 Clay Street, Oakland, CA 94612
Email Address cbaker@dir.ca.gov	Telephone Number 510-286-7087	
<p>1. Statement of the need for the proposed major regulation.</p> <p>California consumes and produces a large amount of petroleum products. The petroleum industry plays an important role in the economy and is isolated from the larger national market due to unique pollution-control regulations. Under existing regulations, significant incidents have recently occurred, including the 2012 Chevron Richmond facility fire and 2015 ExxonMobil Torrance incident, endangering workers and communities and costing consumers billions. To address inadequacies, the proposed refinery CalARP and PSM standards represent a significant change from the existing CalARP and PSM standard contained in Title 8, Section 5189. They include new management system elements, a more carefully defined hazard analysis process, and provisions to expand employee participation and employee access to reports and other information developed pursuant to the standard. These new California regulations will likely increase refinery planning and other costs, but they are also expected to benefit refinery workers and the public by reducing the rate of serious refinery incidents, workplace injuries, and accidental discharges of hazardous and toxic substances. These regulations incorporate recommendations of Governor Brown's Interagency Working Group on Refinery Safety.</p>		
<p>2. The categories of individuals and business enterprises who will be impacted by the proposed major regulation and the amount of the economic impact on each such category.</p> <p>The proposed major regulations shall apply to processes within petroleum refineries. "Petroleum Refinery" refers to an "industrial site engaged in activities set forth in North American Industry Classification System (NAICS) Code 324110." The official NAICS Code description provided by the United States Census Bureau states that "this industry comprises establishments primarily engaged in refining crude petroleum into refined petroleum. Petroleum refining involves one or more of the following activities: (1) fractionation; (2) straight distillation of crude oil; and (3) cracking." The proposed PSM and CalARP regulations will create an estimated 158 jobs in the state's petroleum refining sector (between 57 and 325 jobs), based on an estimated total compensation (generated by IMPLAN) in the California refinery sector of \$334,000 per employee and a total increase in labor costs of \$58 million.</p>		
<p>3. Description of all costs and all benefits due to the proposed regulatory change (calculated on an annual basis from estimated date of filing with the Secretary of State through 12 months after the estimated date the proposed major regulation will be fully implemented as estimated by the agency).</p> <p>In the initial year of implementation, Industry would be directly impacted by the proposed major regulation, incurring an estimated annual cost of \$58 million in labor for refiners to maintain compliance with the proposed regulations. The price impact, or cost to society, is anticipated to be distributed over consumers' costs to purchase 14.5 billion gallons of California gasoline per year, based on recent annual averages, at an increase in price of \$0.004 per gallon. Aggregating this to calculate the impact on the average adult Californian gives an estimated cost per person of about \$2 per year. It should be noted that the additional refiner spending on labor drives higher costs and more than offsets the drag that this slightly higher cost of gasoline places on the economy. The stimulatory net effect of the refiners' additional spending would slightly exceed the inhibitory effect of higher gas prices. Safety improvements could help industry and society avoid costs as fewer workers and public will be injured or require medical care. Fewer incidents will help industry and California avoid economic disruption due to incidents and process interruptions, noting the average impact of the three most costly major incidents (exceeding \$1.5 billion on the California economy) that have occurred in California since 1999 each cost the refiner at least \$220 million.</p>		
<p>4. Description of the 12-month period in which the agency estimates the economic impact of the proposed major regulation will exceed \$50 million.</p> <p>It is anticipated that the proposed major regulation will exceed \$50 million in the initial year of implementation. This initial year will require industry to hire and train staff to carry out the requirements of the proposed regulations, estimated to cost \$58 million. During this first year of implementation, start-up costs will be incurred to establish the requisite programs detailed in the regulations, accompanied by effective protocol and policies to ensure compliance with the provisions. While timelines for completing some requirements extend into the next 3-5 years in some cases, refiners recognize they will need to begin setting up the infrastructure and framework immediately once the regulations go into effect to ensure they will meet the deadlines for compliance.</p>		

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**5. Description of the agency's baseline:**

Although data limitations precluded estimation of an established baseline, a breakeven analysis was conducted to compare the costs and benefits. The estimated breakeven point for effectiveness was 7.3%. This indicates that if the regulations reduced the risk of a costly major incident by 7.3% (noting the expected annual loss of \$800 million to the California economy due to a costly major refinery incident), the proposed regulations would be economically justified.

**6. For each alternative that the agency considered (including those provided by the public or another governmental agency), please describe:**

- a. All costs and all benefits of the alternative
- b. The reason for rejecting alternative

One alternative considered was continued enforcement of petroleum refineries under the existing PSM and CalARP regulations without revising the requirements. In the past four years, there have been two major incidents (Chevron Richmond in 2012 and ExxonMobil Torrance in 2015). Per the Governor's Task Force Report existing law, regulation, and level of staffing were unable to forestall the Chevron incident and more needs to be done to prevent future incidents of similar or worse consequences. Since 2012, Cal/OSHA has increased enforcement staffing to 10 safety inspectors dedicated to refineries. The additional level of safety achieved through the increased enforcement efforts will be maintained under the current PSM requirements. The costs associated with the continued enforcement or status quo under the existing regulation reflect an unknown but anticipated number of incidents that may happen in the absence of the requirements and tools provided in the proposed new PSM regulation. These consequences are largely untenable, given the levels of incidents experienced in the recent years.

Another alternative considered was the "Safety Case" approach. The "safety case" approach involves considerably more resources in terms of time and agency inspectors. The Hazardous Facilities Unit, which oversees the United Kingdom with safety cases, typically conducts several audits each year at refineries to assess their safety case activities. The safety case model requires facilities to explain what they will do in order to try to ensure their safety. The regulatory authority is charged with determining whether a facilities' explanation or effort is acceptable or effective. Most regulatory scrutiny goes to auditing the facility to determine whether it has been carrying out the activities called for in the safety case document. Although some contend that the safety case process leads to initial gains in hazard recognition and abatement, however, it must remain "a living document" in order to fulfill its objectives. A concern with the safety case approach is that describing and documenting how a refinery will manage risks is not equivalent with actually managing risks. Further, augmenting oversight from the existing regulations to a level prescribed by the "safety case" approach would be largely infeasible given the related requisite resource demands for regulatory authorities. This approach is estimated to require a fourteen fold increase in staff for Cal/OSHA – from 10 inspectors statewide to 10 inspectors for each of California's 14 refineries. Additional costs for refineries would also be anticipated, given the significant changes this would necessitate in regulatory dynamics. For these reasons, the "safety case" model is not considered a reasonable alternative to the proposal.

**7. A description of the methods by which the agency sought public input. (Please include documentation of that public outreach).**

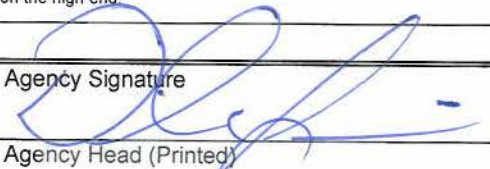
Multiple stakeholder and advisory meetings with labor, industry, community and advocacy groups, and other agencies have contributed to the development of the proposed regulations. All input has been considered, and the current proposed regulations reflect a balanced, enforceable, and prevention-focused approach to reducing risks in this industry. Proposed versions of the regulations were posted online and written comments were accepted through email. In person meetings were held in Oakland (September and November of 2014) and Los Angeles (June 2015).

Prior to developing the draft language, DIR, CalOES and CalEPA held five meetings with stakeholders. After releasing the draft CalARP regulation proposal, CalOES held public workshops to obtain input:  
 Thursday, June 4, 2015, Martinez  
 Monday, June 29, 2015, Carson  
 Tuesday, June 30, 2015, Torrance  
 Wednesday, July 1, 2015, Bakersfield

**8. A description of the economic impact method and approach (including the underlying assumptions the agency used and the rationale and basis for those assumptions).**

Costs to industry and society, and benefits to industry and society were estimated using information that each of the 12 refineries in California provided through the course of structured interviews with refinery personnel and in written responses. During these discussions, refiners' opinions were elicited on the changes in safety procedures and management practices that would be required under the proposed refinery regulations. Each of these changes will have cost implications. The subcategory estimates of costs and benefits for industry and society were integrated into a consistent portrait of costs and benefits to the California economy using INPLAN, a widely used macroeconomic model. This provides a systematic way of avoiding double counting while capturing many of the secondary economic effects that result from changes in prices, employment, and related impacts of the regulations.

Key underlying assumptions for estimating impact of the proposed regulations are that additional regulatory costs will be passed on to consumers through increased gasoline prices and that demand for gasoline is perfectly inelastic. The variance in cost estimates from one refiner to the next was used as a way of assessing and quantifying the uncertainty in the estimates. These uncertainties include both incomplete knowledge of what it will cost to meet well-understood objectives and, in cases in which one could interpret the regulatory language in multiple ways, unknown aspects of regulatory implementation. Refiners expressed a wide range of opinions about the degree to which the new regulations might differ in practice from existing regulations, and the range of costs estimated reflects these interpretations. Aggregation techniques were used to quantify this uncertainty, a range of \$20 million per year on the low end and \$183 million per year on the high end.

Agency Signature 	Date 3/16/16
Agency Head (Printed) David Lanier, Secretary, Labor and Workforce Development Agency      Mark Ghilarducci, Director of Governor's Office of Emergency Services	