

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Website address: www.dir.ca.gov/oshsb**PROPOSED PETITION DECISION OF THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
(PETITION FILE NO. 512)****INTRODUCTION**

The Occupational Safety and Health Standards Board (Board) received a petition on November 2, 2009, from Ms. Colleen Kraus, Valero Energy Corporation, (Petitioner). The Petitioner requests the Board to amend Title 8, California Code of Regulations, concerning chain and cable ladders (known as Jacob's ladders) used by the petrochemical industry to perform maintenance inspection and repair work.

Labor Code section 142.2 permits interested persons to propose new or revised regulations concerning occupational safety and health, and requires the Board to consider such proposals, and render a decision no later than six months following receipt. Further, as required by Labor Code section 147, any proposed occupational safety or health standard received by the Board from a source other than the Division of Occupational Safety and Health (Division) must be referred to the Division for evaluation, and the Division has 60 days after receipt to submit a report on the proposal.

SUMMARY

The Petitioner points out that there are currently no California regulations, ANSI Standards or American Ladder Institute policies that address chain and cable ladders used in the petrochemical industry. According to the Petitioner, the lack of safety regulations for this particular type of ladder can potentially pose a threat to worker safety if the chain and/or cable ladder is not manufactured properly, not in good condition, or used improperly. Ms. Kraus submitted a proposed chain and cable ladder standard to address those safety issues and concerns.

The Petitioner is of the opinion that fixed or portable ladders and scaffolding are too large to allow the necessary access into petrochemical vessels of various configurations – workers must descend into the tight cylindrical configuration of stacks and towers of coker units and cyclones and perform inspections or repair of pressure vessel cyclones. The Petitioner proposes standards that would apply only to petrochemical facilities as part of the Petroleum Safety Orders and would state that “Jacob’s Ladders” are to be used only when other alternatives are not feasible.

DIVISION'S EVALUATION

The Division's evaluation report dated February 18, 2010, stated that it conducted an onsite visit to the Valero Benicia, California facility and that in the Division's opinion the petition has merit to the extent that the Division proposed several revisions of the proposed language regarding terminology, removal of equipment specifications, requirements for a written safety plan and specific training requirements. The Division's evaluation included proposed language for Section 6755 and new Section 6799.1 of Subchapter 15 of the Petrochemical Safety Orders.

STAFF'S EVALUATION

Although seldom used and although the refineries would prefer not to use them, these chain and cable ladders are the only access option available to perform the needed vessel inspections. Jacob's ladders are flexible chain or cable ladders used within the petrochemical facilities. The ladder consists of two chains or cable stringers, spacer disks, rungs, and lasher rings and fittings. The chain stringers are made of galvanized steel and the cable stringers are steel. The ladder rungs are made of steel pipe or sheet steel spaced 14 inches center to center. The ladders can be hand carried in sections or transported to the site and must be removed after each use as vessel temperatures may reach 1000 degrees.

Use of these ladders averages once or twice a year, and they may not be utilized for several years based on the maintenance or servicing schedule of the vessel unit. Valero had been using these ladders for decades without incident until June, 2009 when an employee suffered a lost time injury from a fall using a Jacob's ladder.

Under current Title 8 standards, the Division cannot cite a regulation that would directly address this type of ladder. Both Division and Board staff are uncertain as to whether these ladders fall within the Title 8 definition of "special purpose ladders." The absence of a specific standard limits the Division's ability to enforce safety procedures for the use, maintenance, testing and inspection of these devices. Existing ladder standards do not address the safety issues specifically associated with Jacob's ladders. Therefore, new and unambiguous language specifically pertaining to this type of ladder should be added to Title 8.

The Petitioner proposes a standard that includes design requirements, inspection criteria, load testing, ladder use and training. The standard would only apply to petrochemical facilities as part of the Petroleum Safety Orders and state that Jacob's ladders are only applicable when other alternatives are not feasible. Users would be required to wear safety harnesses attached to a fall protection retrieval system. In addition, users would be prohibited from holding objects while climbing or descending and the ladder could not be used near energized electrical equipment. The proposed standard is modeled after military specifications (MIL-L-221C) for Jacob's ladders dated May 21, 1957. Comments and recommendations from the Process Safety Management group of the Western States Petroleum Association (WSPA) have been incorporated into the proposed standard. The Division and Board staff concur that the Petitioner's proposed language is a noteworthy start. The Division has suggested modifications

that would clarify the language, address safety issues comprehensively and define commonly used terms.

Based on the industry-specific use of these ladders, Board staff agrees that the scope of the proposed standard be limited to the petrochemical industry. As the Petitioner (Valero Energy Corp) and other oil refineries (i.e., Shell Oil Company, Tesoro Corporation, ConocoPhillips, Chevron, BP [Beyond Petroleum-formerly British Petroleum]) have utilized this type of ladder for decades, it is appropriate to apply these standards to the industry most affected regarding this device. Expanding this requirement outside of the Petroleum Safety Orders would not be prudent as it affects only a narrow group of employers. Therefore, rulemaking language should be focused within the petrochemical industry and the Petroleum Industry Safety Orders.

Board staff recognizes the Petitioner's concern for the safety of workers and the injuries that can occur if the Petitioner's ladders are used indiscriminately without regard for the safety issues mentioned earlier. The Petitioner's proposed chain and cable ladder standard addresses those safety concerns. Developing standards specifically for this type of ladder would eliminate confusion in terms of what Title 8 ladder standards, if any, apply and ensure these ladders are designed and tested to safely support intended loads, used safely by trained workers, and properly maintained. Such rulemaking would benefit from an advisory committee so that a range of stakeholders broader than one employer (Valero) may have input.

CONCLUSION AND ORDER

The Occupational Safety and Health Standards Board has considered the petition of Ms. Colleen P. Kraus, Valero Energy Corporation, to make recommended changes concerning chain and cable ladders (known as Jacob's ladders) used by the petrochemical industry to perform maintenance inspection and repair work. The Board has also considered the recommendations of the Division and Board staff. For reasons stated in the preceding discussion, the Petition is hereby GRANTED to the extent that an advisory committee representing labor and management from the petrochemical industry be convened.