

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Website address: www.dir.ca.gov/oshsb**MINUTES OF THE ADVISORY COMMITTEE FOR
CHAIN AND WIRE ROPE ACCESS LADDERS
(JACOB'S LADDERS)**September 29, 2010
Sacramento, California

The meeting was called to order by the Chair, Marty Tamayo, Associate Engineer, Occupational Safety and Health Standards Board (Board), at 9:00 a.m. on Wednesday, September 29, 2010, in Sacramento. The Chair was assisted by Ms. Bernie Osburn, Staff Services Analyst, Board. Michael Manieri, Principal Engineer, was present. Senior Engineers Patrick Bell and Michael Donlon represented the Division of Occupational Safety and Health (Division) Research and Standards Unit. Clyde Trombetta, Division Principal Engineer with the Process Safety Management Unit was also present.

The Standards Board policy regarding the use of advisory committees as an effective way to reach consensus was reviewed. The Chair explained that the advisory committee was convened at the direction of the Board in its decision regarding Petition File No. 512. The committee consensus will be used to develop a reasonable and effective proposal; however, the Chair advised the committee that the Board and Board staff may use discretion to amend, modify or reject the recommendations later in the rulemaking process.

The Petitioner, Ms. Colleen Kraus, Process Safety Design Director of Valero Energy Corporation, recommended the adoption of new Petroleum Safety Orders to address chain and wire rope access ladders (known as Jacob's ladders) to perform maintenance inspection and repair work. There are no California regulations, ANSI Standards or American Ladder Institute policies that address these specialty ladders. Furthermore, there is no counterpart Federal standard that specifically addresses chain and wire rope ladders. Although other industries showed interest and utilization of Jacob's ladders, the Chair emphasized that the committee's focus is on the petrochemical industry.

Ms. Kraus pointed out that Valero is a Cal/OSHA Voluntary Protection Program Star site (VPP) that had a recent lost-time injury to a worker using a Jacob's ladder. The proposed regulation is modeled after a 1957 military specifications manual for Jacob's ladders used by the U.S. Navy. Ms. Kraus noted that her focus remained within the petrochemical industry based on her familiarity with this industry. She displayed an aluminum chain ladder representative of the ladders currently used at their Benecia location. In addition, a sample rope and compressed rubber ladder that the Coast Guard is using was brought for comparison. For practical purposes, only the metal chain and wire rope versions are capable of meeting their needs. The Petitioner noted that all the northern and southern process safety managers

participate through the Western States Petroleum Association (WSPA) which meets every other month. She brought this issue to them to evaluate and receive comments. At the last meeting of the WSPA on September 16, 2010, Ms. Kraus provided the members copies of the advisory committee information. WSPA members felt that their concerns were addressed in the material the Petitioner provided for their review.

The Chair opened the discussion by reading a proposed definition of "*Chain or Wire Rope Access Equipment*" that might be added to Section 6755. No objections or comments regarding this definition were forthcoming. The next item introduced was to add a new Section 6799.1, entitled "*Use of Chain or Wire Rope Access Equipment,*" to accommodate the language submitted by the Petitioner.

The Chair read the Scope and Application subsection as written on the proposal. Mr. Bedoya commented whether specifying the word "cyclones" alone was adequate or inserting the term "et cetera" be added to cover other constricted locations. Mike Donlon responded that the words "such as" prior to cyclones address that concern. The committee agreed and proceeded to the next subsection.

As to Subsection (b) *Equipment*, Mike Donlon noted that reference to Section 3206 required an approval process by a nationally recognized testing laboratory and that some form of documentation would be required by the Division ensuring the product has been approved by the manufacturer or competent engineer. The Petitioner and Mr. Schulte, Safety Coordinator for Valero Refining, concurred with having standards for testing as it adds validity and promotes confidence in the product.

Subsection (c) requires that a qualified person conduct a visual inspection of the equipment. Noting the difference in definition between a qualified person and a competent person, Terry Schulte opined that a qualified person would take the requirements needlessly to a higher level. According to its definition, the competent person can perform the inspection and take the corrective actions as needed.

Patrick Bell interjected that it comes down to what you want to accomplish; either visually inspect and take corrective action to remove the ladder from service or use someone designated by the employer who has the appropriate skills to recognize the hazard and make recommendations to eliminate the hazards.

Mr. Schulte countered that the person using the ladder is the one that inspects and determines if it needs to be tagged out and sent back to the manufacturer for repairs. It would not require a qualified person's credentials to make this determination. Bob Bedoya and Ms. Kraus concurred that the competent person's responsibilities would be more appropriate and meet the intent of the task.

Clyde Trombetta commented that his understanding is that a qualified person has a higher degree of education, versus the competent person, and that distinction is the difference. The competent person is distinguished by the ability through authorization to take prompt corrective action.

Mike Donlon suggested a definition of a qualified person be provided to make a determination. The Chair read the definition from Title 8. Mr. Donlon noted that the definition of qualified person is distinguished by the terms "...when required, is properly licensed..." and in this case there is no requirement for a license and therefore would not apply.

Ms. Kraus opined that the intent is not for the user to repair the ladder but rather to identify hazards associated with the ladder, and the definition of competent person best meets the intent. For comparison, Mr. Donlon read the definition of “competent person” from the Construction Safety Orders. Ms. Kraus expressed total agreement with that definition and suggested that it be added to Section 6755. She further stated that “competent person” should replace “qualified person” as the appropriate person for conducting the inspections. Without further discussion, the committee concurred with these recommendations.

The Chair proceeded to subsection (d) *Equipment Use Plan* and read the proposed language through subsection (d)(2) without objection or comment. Subsection (d)(3) requires “*Justification as to why the use of fixed or portable ladders is not feasible for each location identified for equipment use.*” The Chair read and noted that the next sentence was enclosed in parenthesis; “*(a single justification may be used for multiple locations that have substantially the same characteristics)*”). Patrick Bell interjected that parenthetical sentences by regulatory constrictor are notes and have no regulatory effect. If the intent is to have this sentence as part of the regulation, then the parenthesis should be removed and made part of the regulatory requirements. Otherwise, identify the passage as a note. The consensus was to remove the parenthesis and allow the passage to become incorporated in the subsection.

As with subsection (d)(3), subsection (d)(4), *Installation details for each location*, contained essentially the same passage within the parenthesis. The committee consensus was to remove the parenthesis, but retain the verbiage as part of the regulatory proposal.

Discussion continued to subsection (d)(5) *Inspection instructions*. Ms Kraus recommended that a list of items to look for when conducting an inspection of the ladder be included. Mr. Bell agreed. In addition, Ms. Kraus opined that load testing is required for fixed and portable ladders under ANSI standards and should be addressed in the language. Terry Schulte concurred and added that current industry practice is to conduct load testing annually. Mr. Donlon and Mr. Bell interjected that caution must be used in prescribing how these ladders are load tested as damage may occur during the procedure. Ms. Kraus suggested that the load testing procedures outlined in the ANSI standards for fixed and portable ladders could be referred to. The Petitioner offered to develop the language for load testing based on the original petition. The committee agreed that these procedures should be placed in Section (c) *Inspection* which would incorporate section 5 of the original proposal.

The Chair continued to Section (e), *Use*, and read the proposal for subsection (e)(1): “*Employees using chain or wire rope equipment shall wear a safety harness that is attached to a fall protection/rescue retrieval system at all times while on the equipment.*” Mike Donlon noted details of Title 8 fall protection requirements. Mike Manieri suggested that, at this point, it may sufficient to mention that fall arrest system in accordance with Article 24 as the Board may address self rescue language at a future date. After a short discussion on fall arrest, positioning devices and restraint systems, it was decided that the words *fall protection* should be deleted from the text. The rescue retrieval system terminology will be maintained but “*in accordance with Section 5157(k)*” will be added to the text.

Wayne Howard, Valero PSM Manager, noted that, for consistency, all references to chain or wire rope equipment should be “*chain or wire rope access equipment.*” All present agreed.

Mr. Bell recommended that for formatting and clarity, subsection (e)(2) and (3) should be rewritten as subsections (e)(2)(A) and (B). Ms. Kraus and Mr. Bell pointed out that the *Exception* following (2)(B) applies only to subsection (2)(b) and should be noted as such. The committee agreed to these changes.

Mr. Donlon suggested that a provision to the effect that there should be only one person on the ladder at a time should be added to the proposal as a new subsection (e)(3). The general consensus was to adopt Mr. Donlon's recommendation.

The Chair noted that the Board received a written comment prior to the advisory committee meeting regarding the use in subsection (e)(4) of the word "carry" when using tools, equipment or materials while on the ladder. The commenter opined that the term "carry" was not the appropriate word, as tools and materials are not necessarily carried by hand. The intent is to ensure that a three point contact is maintained at all times while ascending or descending the ladder. Therefore, the verbiage should indicate that the user should not "hold" or "hand carry" tools, equipment or materials. The committee agreed to use the words "hand carry."

The Chair reviewed subsequent subsections of (e) with no comments or opposition to the existing proposed language.

The final subsection (f), *Training* was opened for discussion. Under subsection (f)(2), *Inspection and correct use of the personal fall protection equipment used*, it was suggested that, for consistency and in light of the previous discussions of subsection (e)(1), the words, "personal fall protection equipment used" be deleted and that the words "in accordance with subsection (e)(1)" be added. The consensus was to adopt those modifications.

The Chair read the final subsection (f)(3) *Climbing techniques*. After a short discussion, the committee decided that this subsection could be eliminated by adding the words "or working" to subsection (f)(1).

As a final issue, the Chair explained to the committee that an important and required part of the rulemaking process is the identification of costs or savings resulting from the proposed rulemaking. He asked the committee for comments on the economic impact.

Clyde Trombetta said there would be no additional impact, as the petrochemical industry is already using this system. The Chair asked if there was any affect economically as far as training was concerned.

Ms. Kraus opined that the industry has been using these ladders for many years and have developed their own training requirements. Economic impact is minimal, if any. The concern is to ensure that safely made ladders are being used. She noted that it doesn't cost money to load test or visually test the product. Retrieval equipment is already in place at all plants as part of their operation and there are no additional associated costs unless the industry does not follow safe work practices or use faulty equipment.

The Chair concluded that given the unanimous support expressed by the committee, there was a consensus to proceed with the rulemaking. The Chair stated that committee members will receive a copy of the meeting minutes and a copy of the final consensus proposal and be given a brief comment

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period to suggest any further revisions. Members will have the opportunity to comment on both prior to preparation of a formal rulemaking proposal. There being no further comments or questions, the Chair thanked the Petitioner and committee members for their participation and adjourned the meeting at approximately 12:00 p.m.