

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

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MINUTES OF THE ADVISORY COMMITTEE FOR GISO ARTICLE 13, SECTIONS 3441, SECTION 3449, AND CRLA RECOMMENDATIONS

May 6, 2014
Sacramento, CA

Call to Order and Introduction.

The meeting was called to order at 9:03 am by the chair, Maryrose Chan, Senior Safety Engineer, Occupational Safety and Health Standards Board (OSHSB). Michael Manieri served as co-chair. The chairperson was assisted by Bernie Osburn, Staff Services Analyst.

The Division of Occupational Safety and Health (Division) was represented by Eric Berg, Acting Principal Engineer of the Research and Standards Safety Unit and William Krycia, Senior Safety Engineer of the Enforcement Unit.

The chair welcomed attendees and reviewed the role of the advisory committee in the rulemaking process. Chair listed the topics that will be discussed during the meeting:

The Division's Proposal regarding illumination as it relates to agriculture equipment
Board staff's proposal regarding area lighting
California Legal Rural Assistance's (CRLA's) recommendations

Discussion on Necessity.

The background information for the discussion was given by Eric Berg. He discussed why night time work is important to farmers. He discussed the importance of providing good lighting in order for employees to see what they are doing and perceive their environment when performing night time agricultural operations. His presentation included a summary of serious or potential serious accidents that were reported to the Division that occurred between sunrise and sunset between 1998 and 2012.

Chris Valadez of California Grape and Tree Fruit League commented that including the harvesting of table grapes as a reason for proposing a change in the standard is incorrect. Table grapes are not harvested at night. Stone fruits, such as peaches, plums, and nectarines are harvested during the daytime.

Members expressed concern that there was an assumption that accidents that occurred during hours of darkness were caused by the lack of illumination. The chair clarified that the summary of accidents is meant to provide information to show the type of activities that occur between sunset and sunrise.

Illumination.

- The chair discussed and defined the various terms related to illumination: lumens, lux, and foot-candles and how it relates to existing standards.
- The chair gave various examples of illumination levels.

SECTION 3441 (DIVISION'S PROPOSAL)

The chair gave a subsection by subsection review of the proposed changes.

Subsection (g).

The Division's proposal would require trucks to turn on headlights at night. Last sentence pertaining to additional lighting requirement will be moved to subsection (h)

Subsection (h).

The chair provided the rationale for the proposed 10 foot-candle illumination extending 25 feet distance from the agricultural equipment. The objective of the 25 feet distance is to illuminate the object from the point of detection to the complete stop. The proposed 10 foot-candle illumination level was derived from Section 1523(a) of the Construction Safety Orders.

The chair used a report as reference: NCHRP Report 498, Illumination Guidelines for Nighttime Highway Work by Transportation Research Board. In it is Table 10: Recommended Illuminated Distance, which recommends illuminated distances in the direction of travel for various type of construction equipment (chapter 2, page 18 of the report). It stated that human reaction time is 1.5 seconds. The speed of the agriculture equipment was a critical factor in determining the 25 feet illumination distance.

The chair posed 2 main questions to the AC members:

- At what speeds do agricultural equipment typically operate?
- How appropriate is the 10 foot-candle illumination level for the operations conducted at night?

Comments on Subsections (g) and (h).

Illumination is typically provided by light fixtures mounted on tractors or agricultural equipment and personal portable lighting (flashlights and head lamps).

Ryan Metzler of California Wine Grape Growers stated that harvesters travel about 1 mile/hour and tractors operate at a speed of approximately 3-5 miles per hour in the farm fields. Eric Berg stated that equipment on farm roads travel at 10-15 miles per hour.

The question regarding the appropriateness of the proposed illumination level of 10 foot-candles was unanswered. Members of the committee could not visualize the brightness level of 10 foot-candles. Members were encouraged to take light measurements in order to comment on the proposed level. The process of taking measurements of illumination levels for most crops would have to wait until harvest time (August to October), when most of the night time work activities take place.

Some attendees particularly members from the grape industry expressed concern about the requirement to provide lighting alongside the equipment. They felt that lighting should be provided in the direction of travel because employees performing hand labor and machine harvesters travel in a straight forward direction between rows of grapevines.

The chair and other members pointed out that the proposed standard applies to all other crops, including those that do not have rows of vines acting as walls. Anne Katten of CRLAF said lighting is very important in areas where they are growing crops low to the ground. Employees work on the equipment and routinely get on and off equipment.

The chair clarified that the proposal does not require lighting to be provided in a 25 feet radius from the agricultural equipment in areas where employees are not located. If there are no employees then there is no exposure. However, if employees are to get off the equipment and will be walking alongside, then lighting is required.

Rudy Avila of Jaguar Labor Contractor provided details of his operation. The company he represents provides labor for manual hand harvest. Growers provide tractor mounted lights for illumination of work areas. Employees are provided traffic vests, head lamps, and whistles. His company manages about 1,000 employees for wine harvest. Employees use knives for harvesting.

Another concern that was brought up was foliage or other structures that may block light; therefore, the employer would not be able to comply with the prescribed illumination level for certain areas. Those concerns were addressed by the proposed New Section 3449. It contains a provision to provide additional lighting via personal portable lighting.

Ryan Metzler asked for clarification of Section 3441(g) regarding the wording "illuminate the rear of the equipment". He stated, "for the sentence stating providing lighting 50 feet in front, I know we are probably talking about white light". For the wording "one rear light to illuminate equipment at the rear", he asked if a tail light would suffice. For clarification, he posed the following questions: (1) What type of light are we talking about? (2) How far does it have to illuminate? (3) What color? (4) Is there a special light other than the tail light?

The chair and William Krycia answered Mr. Metzler question. Section 3441(g) applies to the tail lights, not intended to provide lighting up to 25 feet at 10 foot- candle illumination. It refers to vehicle safety standards (ASABE-American Society of Agricultural and Biological Engineers).

Section 3441(h) speaks of the proposed supplementary lighting that would provide 10 foot-candles up to a distance of 25 feet.

Discussion regarding suggestions to amend the proposed language of Section 3441.

Mike Meuter of CRLA stated that he believes the intent of (g) was for agriculture equipment to have lights that illuminate to 50 feet and for the light to be turned on. Mr. Meuter proposed to add language stating ...“shall be equipped with at least one headlight which shall be used to illuminate the area in front of the equipment for at least 50 feet”.

Bryan Little of the Farm Bureau stated that 3441(g) wording states that “equipment shall be equipped with at least one headlight that will illuminate the area in front of the equipment at least 50 feet. There shall be at least one rear light to illuminate equipment at the rear..” The words to illuminate imply that the light needs to be used. He asked whether enforcement employees find agricultural equipment with lights not turned on.

Eric Berg stated that the language proposed by Mike Meuter is for clarity and there is no regulatory effect with language change.

Michael Manieri of the Standards Board is in support of clarifying the wording. You have to be clear that the lighting provided should have the capacity to illuminate and it needs to be turned on. The two go together.

Subsection (i).

Requires the employer to provide Class 2 high visibility garments

- The chair shared a comment she received, that additional clothing may add to the risk of heat stress. Chair clarified that employers can select other type of protective clothing instead of vest (e.g. high visibility T-shirt).
- The chair asked the committee to provide the cost information of providing employees with personal protective clothing.

Anne Katten of CRLAF commented that she agreed that there should be flexibility regarding the type of garments because of heat concerns and she suggested language that would say that it should fit in a manner that does not impede work or create a safety problem.

The chair responded to Anne Katten by stating that there already is a separate standard on personal protective equipment selection that addressed her concern, Section 3380. It requires employers to perform a hazard assessment and select the appropriate PPE.

The chair shared the study published in California Agriculture in the January –February 1987 issue. The study was conducted by UC Cooperative Extension researchers with Southern California Edison. The chair shared this information to show how the standard can be implemented and how good quality lighting can benefit the employer by increasing productivity. The illumination levels are different from the proposal, but the concept of the study is the same. This study was conducted about 27 years ago and lighting technology has improved.

SECTION 3449 (BOARD STAFF'S PROPOSAL).

Prior to introduction of Subsection (a), chair posed the following questions to the AC Members:

- What should the illumination level be at night when there is no agricultural equipment within 25 feet?
- What type of work do employees perform and how does that affect illumination levels?
- What about personal portable lighting?

Subsection (a)

The chair introduced the proposal regarding area lighting. Table 1 contains a prescribed illumination level for a corresponding task or area. The proposal draws upon illumination information from outdoor highway construction. The chair referred to NCHRP Report 498, *Illumination Guidelines for Nighttime Highway Work*, by Transportation Research Board of the National Academies. The report recommended 5 foot-candles for general illumination where crew movement is expected and for tasks requiring low accuracy, 10 foot candles for general illumination on and around construction equipment and medium accuracy type tasks and 20 foot-candles for task that present higher visual difficulty or greater attention. The proposal is consistent with the lighting principles of the Illuminating Engineering Society, which correlates level of illumination with the level of accuracy required to perform the task.

Comments Regarding Subsection (a).

Members of the AC could not comment on the appropriateness of the proposed illumination levels in Table 1. Members were encouraged to take measurements to see for themselves and determine if the proposed levels are reasonable. According to members of the committee from industry, the process of taking light measurements would have to wait until harvest season (August to October). CRLA raised concerns regarding illumination levels that are only 3 to 5 foot-candles. Anne Katten suggested looking at USDA's recommendations. Mike Meuter commented on the need for more specificity or to further define the areas described.

Rudy Avila commented that the USDA lighting standards are not applicable because employees are not processing food. Harvesting is not processing.

Rudy Avila said that last year he purchased about 40,000 AAA batteries. He had tried to use battery powered light in the restroom, but some (13) were stolen. Employees use headlamps when using the restroom. The outside of the restrooms are solar lit and have reflective lights so that it can be seen. He places cones on hitches. The solar light dims at about 3:00 am.

Discussions regarding amending the proposed language Subsection (a).

The chair asked for suggestions to improve the description of the various areas and tasks and ranking them by illumination need. The chair asked for suggestions in improving the description of areas that are too vague or open.

There was a consensus:

- To clarify that the section applies to outdoor agricultural operations.
- To conduct light surveys to determine the appropriateness of the proposed illumination levels and to further define the various areas that would require lighting.
- To remove “low activity areas” because it was not clear as to what those areas were. “Meal/rest area” was added to be more specific.
- To change “pathways leading to restroom and drinking water” to “pathways leading to and around restrooms and drinking water”. There was an acknowledgement that pathways to go to the restroom and drinking water may differ from person to person, because each person depending on their location may choose a different path. Restrooms can be moved during the shift to follow the work/employees. It may not be possible to light the pathway via fixed lighting. The lighting of pathways leading to and around the restroom and drinking water can be accomplished by using personal portable lighting.
- To remove “stationary” from “working near stationary agriculture equipment” because the word stationary is not necessary. Lighting must be provided whether equipment is stationary or mobile.

There was no agreement as to what type of areas would require less lighting than “working near agricultural equipment”, but more lighting than “meeting, meal and rest area”. This level of lighting is for activities that support agricultural operations that require a medium level of accuracy.

Subsection (b).

Supplemental personal portable lighting required when the employer cannot meet Table 1.

- The chair solicited committee’s input to determine if the language should be specific in requiring that the personal portable lighting be the hands-free type.

Comments Regarding Subsection (b).

Brad Goehring said that it should be left open.

Ryan Metzler stated that there are times when employees should use a head lamp and other times use a flashlight.

Eric Berg stated that the proposal does not prohibit the use of a flashlight. Employers can provide hands-free lighting in addition to a flashlight. For using the restrooms, you need to have hands-free. It should be mandated at minimum to provide hands-free and if necessary it can be supplemented by a flashlight.

Subsection (c).

The chair asked for comments regarding adding language similar to Section 1523(b) to the proposed Illumination standard. CRLA advocated for language similar to Section 1523(b) to protect agricultural workers in the same manner construction workers are provided protection. There was an acknowledgement that minimizing glare is important, but enforcing a requirement to minimize glare would be difficult, because lighting and people are mobile, terrain varies, and glare is difficult to measure.

Marley Hart suggested changing the glare provision to a note instead of a subsection.

Eric Berg was asked to research the citation history for Section 1523(b). According to the Division records, Section 1523(b) was cited once in the past 10 years and the penalty was adjusted to 0.

CRLA's RECOMMENDATIONS.

Anne Kattten introduced CRLA's proposal by summarizing the letter they submitted dated February 13, 2014. She stated that some of the issues were already addressed by proposed amendments to Section 3441 and proposed New Section 3449. The hazards that have not been discussed were dealing with general safety issues listed on page 2, letter (e). She stated that the employer's Injury and Illness Prevention Program (IIPP) should address issues listed in (e).

Clarity was sought as to whether CRLA was proposing to amend Section 3203 or if CRLA was proposing a new standard to address the concerns they listed in their letter. It became clear that CRLA was proposing to affirmatively require employers to address the hazard they listed on page 2, letter (e) of their letter, in the employers Injury and Illness Prevention Program.

The chair commented that the IIPP standard, Section 3203 already requires the employer to identify and evaluate the hazards. The Employer's IIPP has to be site specific, tailored specific to their operations.

Some committee members were of the opinion that the safety hazards listed in the letter were already addressed in the IIPP standard. Bryan Little commented that many of these things are addressed by the employer's hazard assessment.

The chair commented that Cal/OSHA publishes model programs for the public. It would be helpful to have an updated model IIPP specific to agriculture to provide guidance to employers in writing their site specific IIPP, raising awareness to some of these issues.

Bill Krycia agreed that Cal/OSHA can improve that publication, but is not volunteering to update the publication for Cal/OSHA. He urged the industry to develop a program of best practices for night time agriculture work.

Cynthia Rice of CRLAF commented that night work is remarkably different than what is normally addressed in the IIPP. The written IIPPs that CRLA reviewed did not address the hazards listed in their letter. They proposed that the Board write a standard to mandate that employers address certain hazards unique to night work in their IIPP.

Marley Hart stated that in Section 3395, the Heat Illness Prevention, there is a note “that the measures required here may be integrated into the employer’s written Injury and Illness Plan”.

CRLA’s LIST OF RECOMMENDED ITEMS TO INCLUDE IN THE EMPLOYER’S IIPP

1. Traffic Plan.

The chair asked the attendees, when is a traffic plan needed and what should be in the traffic plan? The chair commented that the traffic plan in construction speaks of the Manual of Uniform Traffic Control Devices (MUTCD). There was a discussion, but there was no consensus as to what a traffic plan should entail.

Anne Katten stated that a traffic plan is needed when vehicles are going to and from the field for loading and unloading (staging area), when a staging area is at the side of the field where employees are working. She also stated the need to enforce maximum speed on a farm road.

Mike Meuter added that a traffic plan would be needed if a public road was adjacent to the field where the harvest activity is happening.

Some members expressed that traffic hazards are not unique to their operation. They also expressed concerns regarding establishing a written traffic plan. Growers asked how they can create a written traffic plan in their IIPP since they harvest at different places within their property on a given day.

Labor contractors do not have control over the site to be placing signs, directing traffic, and enforcing speed limits.

Eric Berg suggested looking at the marine terminal standard requirements for a traffic plan.

Mike Manieri commented about the reference to Section 3475 traffic control relating to marine terminals. In Section 3475, vehicles have to comply with the traffic plan day or night. The traffic plan talks about complying with posted speed limits and traffic signs. He asked the committee if people that come onto the property are given instructions regarding speed limits.

Rudy Avila replied that in most cases there are speed limits to control the dust. He stated that he does not have a traffic plan, but has an evacuation plan. The staging area varies from ranch to ranch. In Napa, he harvests about 60 ranches and they are all unique. Some of these ranches are large where the areas are more defined. Some ranches are small, near residential areas where there is only one entrance for employees and farm vehicles. How do you write a traffic plan for the 100 different locations?

Mike Manieri asked what the group can envision as a traffic plan. Do you post signs, (i.e. stop, slow, workers present)?

Cynthia Rice commented that it is obvious that companies establish a plan for all the equipment that they need, allowing for the gondolas to go in and out. All the requirement would say is to apply that methodology or coordination at each location.

Brad Goehring replied to Cynthia Rice and said that they do coordinate, but it is on the fly communication with the dispatcher, communicating where to park, where to meet, etc. It is not something that can be enumerated in a fixed plan.

Cynthia Rice replied that the IIPP can come into compliance if the foreman or supervisor who does the planning also communicates to the crew where they are supposed to park their cars and where they cannot enter. It is the same type of communication but it anticipates the safety of the workers.

Anne Katten added that the traffic plan should specify a safe distance from where the trucks are in relation to the portapotties, where the trucks are turning around.

Brad Goehring replied to Anne Katten that he does not agree with quantifying the distances. He moved on to ask Cynthia Rice if an IIPP that specifies communication among the various players and relaying that information would be adequate.

Cynthia Rice said that the IIPP requires the employer to designate of individuals responsible for safety and communication with crews about the safety measures to address traffic hazards.

Gayle Hayden said that harbors do the same thing; each harbor has a traffic plan. Each harbor is different and yet there are standards.

2. Designation of safe areas to gather in the IIPP to start and end work.

The chair asked the AC members if this specific requirement should be added in the IIPP. There was no consensus as to how a designation of safe areas would be implemented.

Brad Goehring replied that it is a moving target as to where that location is.

The chair asked if employers already inform their employees where to gather when they establish their harvest schedule.

Marley Hart asked if it is necessary to include it in the IIPP.

Eric Berg said that the employer needs to communicate to workers where vehicles would be present so that they know that the hazards are in that particular area.

Anne Katten said that her intention was for the process of selecting safe areas for people to gather. The intent is for the employer to survey the area ahead of time to think of the area where it would be safe and traffic would be safe.

Rudy Avila commented, once we have a traffic plan then we will be able to designate a safe area. Right now, we have an evacuation plan and we tell them where to park. We don't have to worry about the bathroom location because it is specified in Section 3457.

3. System for Accounting for Employees.

Rudy Avila commented that he likes the idea, but does not know if it should be in a standard.

Bryan Little commented that it is not clear why this should be in the standard for illumination.

Brad Goehring commented that the meeting was intended to cover illumination.

Chair stated that the agenda included the discussion of the letter from CRLA.

Marley Hart commented that maybe it should be located in a separate section. A standard called illumination containing text regarding locating their employees might be confusing. The location of the standard may be confusing, not the text.

Eric Berg suggested that the section pertaining to illumination can be retitled.

Brenda suggested creating a guidance document that contains recommendations to add to an employer's IIPP instead of adding it in the regulations. Then wait and see how employers are implementing it.

Victor Duraj commented that some of the items on the list are appropriate for night time work because it is marking or lighting of things that may not be visible during the day. Others seem to fall into the category that night time work is a little bit more dangerous than day time work. There are unique hazards that need to be addressed and possibly be addressed by best management practices to assist employers to identify some of these hazards. These are hazards that do not have to be listed in the standards or hazards employers do not readily recognize. There should be recognition that some things are more dangerous at night and the IIPP should account for that.

The chair asked for Victor Duraj's opinion as to which items should be included?

Victor replied, lighting or marking of water hazards and pest and wild animal awareness could be included, but how can you cover everything that is different at night? We can start making a huge list, but he does not know how helpful that would be. Recognition that it is different at night would be a step forward.

Rudy Avilla said that the current IIPP already talks about recognizing the hazard and communicating it to the employees. It is already in Section 3203.

Michael Manieri stated that vermin hazards and snakes are already recognized hazards. It may be a duplication of the standard.

Marley Hart commented that language stating that hazards unique to night work should be identified in the employer's IIPP. This way it allows the employer to identify hazards that are unique to their operation and not limit their hazard assessment to what is on the list.

Cynthia Rice said many of these things CRLA has looked at, like accounting for location of workers, lighting or marking of waters. These items should have been addressed as a standard, as things that should have been imposed on you all, but in recognition of the fact that these work locations are unique and we thought it is better to address them in the IIPP. It is important the employer should have the obligation to look at these operations differently. Workers are being subjected to different hazards and in our experience they are not instituting safety precautions that

would compensate for those hazards; so it should be in either the IIPP or another standard. The general IIPP standard is not going to cover the hazards that are unique at night.

Marley Hart suggested language, “any potential safety issues unique to night time work need to be explicitly identified and communicated to employees. Consideration shall be given to: 1. [List some of CRLA’s recommendations]”. There is a possibility that OAL will raise an issue that this provision is duplicative of the IIPP.

Outstanding Issue.

1. Light survey information for refinement of the proposed illumination levels and description to task and areas in Table 1.
2. Cost information.

Conclusion.

The chair thanked everyone for participating and informed attendees that minutes will be sent out to all who attended. As part of the package that will be sent out, the chair will be asking for an estimate of the total cost of complying with proposed amendments to Section 3441 and new Section 3449. The cost estimate should include the meter, batteries, protective clothing, training, light fixtures, lamps, etc. This information is needed to write the economic impact analysis. The chair will also provide instruction for the light survey. She encouraged the growers/employers to take light measurements. The study discussed during the AC (study conducted the UC Davis Cooperative Extension) will be sent as guidance.

Marley Hart asked for a contact person who will be able to help us determine the cost of the proposal.

Bill Krycia referred Paul Lee of UC Davis who has statistics about the number of agricultural workers in various sectors.

The meeting adjourned at approximately 4:30 pm.