

OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD

2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
(916) 274-5721
FAX (916) 274-5743
Website address www.dir.ca.gov/oshsb



ADVISORY COMMITTEE MEETING MINUTES

California Code of Regulations, Title 8, General Industry Safety Orders, Article 13,
Sections 3437, 3441 and Article 25, Section 3664(b) regarding
the use of tractor-mounted personnel transport carriers.

Agricultural Personnel Transport Carriers

May 21 & 22, 2014
Sacramento, CA

The meeting was called to order by the Chair, George Hauptman, Senior Engineer, Occupational Safety and Health Standards Board (Board) at 9:00 a.m. on Wednesday, May 21, 2014. The Chair was assisted by Bernie Osburn, Standards Board Staff Services Analyst. The Division of Occupational Safety and Health (Division) was represented by Acting Principal Safety Engineer, Eric Berg and William Krycia. Marley Hart, Executive Officer of the Board, and Michael Manieri, Principal Engineer were also present. The Chair welcomed committee members and asked for self-introductions.

The Chair reviewed the Board's policies and procedures concerning advisory committees. The Chair explained that the committee role is to advise the Board. The Board will consider the committee recommendations, usually accepting them, sometimes modifying them and less frequently rejecting the recommendations.

The Chair noted that the Board received two similar petitions (combined because of their similarity as Petition No. 536) in July of 2013. The Petitioners, Buttonwillow Land and Cattle Company and WM. Bolthouse Farms, Inc., requested that the Board set standards for the entire farming community related to the use of agricultural tractors and tractor-mounted personnel transport platforms (carriers). Agricultural personnel transport carriers (PTCs)¹ are used to transport workers in operations involving the installation and removal of irrigation piping.

The Chair stated that the General Industry Safety Orders (GISO), Section 3441(a)(2)(B) prohibits riders on agricultural equipment, other than persons required for instruction or assistance in machine operation. The Chair stated that typically PTCs are attached to the three-point hitch of an agricultural tractor and the Division's position is that employees sitting in the PTC are essentially riding on the tractor since the PTC does not have its own axle. The Division

¹ The committee's invitation documents and discussions referred to tractor-mounted personnel transport platforms as "PTPs." However, some committee discussions reflected the word "platform" for these units lacks clarity. Upon further post committee evaluation, staff agrees and thus, the units for the proposal and minutes are referred to as "personnel transport carriers" (PTCs).

requires growers to have a temporary experimental or permanent variance in order to permit the use of PTCs. The Chair then suggested the Petitioners state the purpose of submitting the Petition requests to the Board.

Wesley Selvidge, Buttonwillow Land and Cattle Co., stated that his family has been involved in farming in Kern County for 152 years and that he has been personally involved in the farming operations for 48 years. Since 1986 their farming operations have used PTCs in both carrot and potato production, and the units are a huge benefit to the health and safety of their employees. They provide moving shade, a place to rest where water is available and relief for employees from having to walk through soft soil or thick vegetation. Mr. Selvidge supported the draft proposal and encouraged the Board to adopt such standards.

The Chair stated that the draft proposal was in large part based upon the temporary variance that was granted to Grimmway Farms in May of 2012. Troy Carrington, Director of Agricultural Compliance for Bolthouse Farms, stated similar comments to those of Mr. Selvidge and urged the adoption of standards to permit the use of PTCs that are both safe for workers and also practicable for growers to implement. Greg Wegis, representing the Kern County Farm Bureau, added that it supported the use of PTCs which have been used over 25 years in their county without a record of any accidents. He noted that the use of one tractor to transport irrigation personnel, materials and assist in the laying and removal of irrigation piping greatly reduces traffic and the number of vehicles on farm roads. He also urged the Board to adopt standards associated with the Petition's request.

Eric Berg gave a brief summary of the Division's current policies and experiences with PTCs. He stated that Grimmway Farms received an experimental variance in 2012 to operate PTCs on level crop fields and private farm roads. Experimental variances are typically granted for one year with the possibility of one or two, six month extensions. Grimmway was operating on an extension of its experimental variance but has since received a permanent variance from the Standards Board for PTC use on level crop fields only. Mr. Berg stated Grimmway was also requesting an additional experimental variance from the Division for the 2014 year to permit operation of PTCs on its farm roads. Several other growers were in the process of applying for experimental variances.

Mr. Berg stated that the Division is concerned about the potential for collisions and/or rollover accidents when there are riders on tractors. He gave a history of several serious accidents related to tractor rollover accidents that involved riders. However, the Chair noted it was his understanding that none of these accidents were associated with the specific PTC unit designs under discussion for this proposal.

The Chair showed a slide show depicting different types of PTCs in California as well as typical terrain that is encountered on farm roads and crops fields. The committee then reviewed federal OSHA standards related to rollover protective structures (ROPs) and provisions similar to California's that prohibit riders on farm field equipment (e.g. tractors). Those federal provisions are in 29 CFR 1928.57(a)(5) and 1928.57(a)(6)(ii). The Chair advised that federal OSHA reviews all proposals for commensurate safety with federal standards and that the committee

should keep that in mind regarding the limitations for use of PTCs, the design of the units, type of terrain (field or farm roads) training and other assurances that mitigate the potential for hazards.

Michael Meuter, California Rural League Assistance (CRLA) was concerned that should a rulemaking action be initiated, the federal standards would likely be in contradiction with the proposal as far as demonstrating equivalent safety. The Chair noted that a review of agricultural equipment standards and discussions with federal OSHA may be necessary. Michael Manieri added that, while the language may not be the same as the federal standard in some cases, it has and can be demonstrated through the provisions and related standards that the hazards are effectively addressed in the proposal.

Joel Sherman, Grimmway Farms, stated that it is important to look back at how these PTC units have been used over the past 25 years. He indicated that there are no records of injuries. However, in other situations where employees are tempted and do ride directly on the tractor or farm implement, there are examples of serious and fatal accidents. The permissible alternatives to the use of PTCs includes the use of ATVs, riding in pickup trucks (cab or truck bed), and using employee or farm contract labor vehicles. He said there is merit to finding a pathway to conclude that equivalent safety is provided by the use of these PTC units.

The Chair raised the topic of tractor manufacturer recommendations with respect to the use of PTCs. He asked if any growers using PTCs had contacted their tractor manufacturer(s). Joel Sherman stated that he had an informal discussion with one of his manufacturers. The bottom line was that they declined or were reluctant to get involved in commenting directly. The Chair indicated that he also had been in contact with a major tractor and farm implement manufacturer about the use of these units. Their policy with respect to these types of units is that they do not give authorization for their use. Another member was of the opinion that this is mainly a legal or liability policy because people modify farm equipment in a number of different ways, some of which are quite hazardous so the general position is that manufacturers do not give recommendations or evaluate these types of equipment.

Wes Selvidge stated that all kinds of devices are attached to agricultural tractors. For example, fertilizer tanks are sometimes installed on the front, top, or side of tractors, and these are situations where there likely has not been an endorsement or approval for their use. Both Carl Borden, Attorney, California Farm Bureau Federation, and Dr. Richard Cavaletto, Associate Dean, California Polytechnic State University, made comments that it is problematic for manufacturers to approve certain types of equipment that they do not manufacture because in the event there ever is any kind of accident, there will likely be legal and liability consequences. Eric Berg added that manufacturers actually prohibit the use of PTC type equipment in their manuals. Dr. Cavaletto noted that there are transplanting machines in use in certain operations with employees stationed on them that attach to the back of tractors and are necessary in the planting process. Manufacturers still take the position that they cannot support or recommend this kind of procedure for planting crops. Michael Meuter stated it is clear that tractor manufacturers are involved in taking a position with respect to riders on tractors. They do not

want additional persons riding on tractors other than the operator or a person for instructional/training purposes and their manuals state this.

The committee then briefly reviewed the recommendations taken from a John Deere tractor manual. With respect to operating the tractor, the manual stated “Never ride on a tractor unless seated in a John Deere approved seat with a seat belt.” The manual also states “The instructional seat, if so equipped, has been provided only for training operators or diagnosing machine problems.” It was discussed that most manufacturers likely have similar recommendations. The Chair stated that he had contacted John Fisher, Alamo Group Agricultural Division, and Mr. Fisher is involved with the Standards Awareness Council of the American Society of Agricultural and Biological Engineers. Mr. Fisher had a conflict and was unable to attend this meeting but did submit an e-mail indicating that tractor manufacturers are not comfortable with the concept of additional riders on tractors or any device for passengers attached to the 3-point hitch. The e-mail was shared with the committee and stated that some manufacturer’s representatives recommend that OSHA should consider the use of utility carts or specially designed trailers to provide transportation for workers.

One member stated that the concerns of the manufacturers do not necessarily take into consideration the conditions and limitations for the use of PTCs and their design and procedures for using them as they have been in row crops over the last 25 years. Troy Carrington agreed with the comment and stated that growers feel that the requirements in the proposed standard address the concerns expressed by manufacturers.

The committee then discussed certain circumstances and hazards that have a causal relationship with the potential for tractors to rollover or upset. Wes Selvidge stated that PTCs are used only on relatively flat ground so they have never had a rollover on their farm operations going back decades even before ROPS were required equipment on tractors. He expressed that heat stress is a greater hazard in these irrigation operations and that PTCs mitigate those hazards.

Joel Sherman stated that typical hazards that would cause or contribute to a rollover or tractor upset include, traveling on hills/steep slopes, greater speeds, uneven terrain. He noted with Grimmway’s operations that they have addressed those hazards to the point that those hazards are mitigated. He further stated that concerns have been expressed by the Division that there is potential for rear tractor traction type rollovers. However, the operation of PTCs is not in the type of terrain or conditions that cause rear tractor rollovers and none have occurred. Eric Berg stated that tractor rollovers are the number one cause of fatal accidents in agricultural operations. However, another committee member added that those serious accidents have not been happening in the type of operations associated with the use of PTCs.

The Chair read portions of the Petition Decision that summarized the Division’s evaluation. The Division’s evaluation noted in the past 10 years there had been citations issued for violations of Section 3441(a)(2)(B). The Chair indicated that the summary indicated that these citations were not necessarily related to irrigation activities and questioned the committee if they were aware of any history of accidents associated with the use of tractor and PTCs of the type subject to the draft proposal. Ann Katten, CRLA, stated that the lack of accidents is noteworthy. However,

she stated the committee should be mindful that OSHA does not hear about all accidents that happen in agriculture or any industry for that matter.

Joel Sherman stated that he was a consultant to Grimmway Farms prior to 1999 and since that time as its safety manager, he is not aware of any accidents associated with the use of PTCs even though irrigation activities is one of their labor intensive and physically demanding farm activities. He attributed the lack of accidents in part to appropriate training, procedures, supervision, and that while using PTCs, workers get occasional rest periods, shade and water while riding them. Matthew Allen, Western Growers Association, made similar comments. Will Creger, Saqui Law Group, added that how PTCs are used including those provisions in the proposal would seem to prevent the type of accidents with tractors that have occurred in other farm activities. Troy Carrington added that without the use of PTCs it is likely that workers would be tempted to ride on tractors or directly on pipe trailers putting them at greater risk. This temptation is eliminated when PTCs are in use.

The Chair inquired about the use and hazards of PTCs in the crop fields versus transportation on private farm roads. It seemed that most of the concerns expressed by the Division and CRLA were that travel on farm roads had the most potential for safety concerns. The Chair asked how integral to the irrigation operations is the use of private roads that are generally used to transport the employees to and from pipe stock or storage areas and travel between various crop field locations. In other words, what are the ramifications of being allowed to use PTCs in the crop fields but not on private farm roads?

Wes Selvidge stated that the operation of PTCs is very slow and somewhat self-regulating, even though the proposal has very low speed limits. In reality, the tractor cannot go much faster than 3 mph in crop fields with the attached PTC and the attached pipe trailer. On private roads, the tractors would not go over 5 mph because riding any faster causes discomfort to the employees and there is no need to travel at greater speeds. In the row crops, irrigation employees generally walk alongside the pipe trailer either laying or removing the piping, so it is very necessary that they can ride in the PTC back to the pipe storage areas and then back to the irrigation lines. This distance from the crops to pipe storage can vary from ½ mile to a mile and is usually a close distance in his operations. He further stated that to prohibit PTCs use on farm roads would eliminate one of the main benefits of their use and would require other vehicles like ATVs and trucks, to transport workers creating greater risk and increased farm road traffic.

Growers in general supported the necessity for the use of PTCs for both crop fields and private farm roads. One grower stated with his smaller operations that at times he has several crews working at the same time. If PTCs could not carry employees back to the pipe supplies, then he would have to purchase or rent 5 to 7 additional vehicles and hire the employees to drive them for just a short period of time during the growing year. He stated this would be inefficient and again, add more traffic on the farm roads.

The Chair asked how growers would operate if traditional vehicles like trucks, vans, ATVs, mule carts and other vehicles were necessary to take the workers from the fields to the pipe supplies or to move workers from one growing field to the next. Joel Sherman stated that Grimmway Farms

has looked at these issues and conservatively estimates that prohibited farm road use of PTCs would increase their operational vehicle fleet between 15 and 20 percent. Also, vehicles other than a tractor will travel much faster than tractors can (e.g. trucks, vans and vehicles and ATVs etc.) and certainly are not limited to 5 mph as stated in the proposal, and greater speeds result in greater hazards on farm roads.

Joel Sherman stated if he has to use vehicles that he does not own, such as farm labor or employee-owned vehicles, he loses control of the safe operating condition of those vehicles, such as the condition of the brakes and tires. He noted that the irrigation activities only occur for several days during the year. The Division seems concerned with traffic accidents on private farm roads with other vehicles. However, Mr. Sherman stated that, during irrigation operations, with few exceptions, there are, in general no other vehicles on their farm roads, except a few of their own vehicles whose drivers are either for supervision and oversight and/or maintenance activities. He opined, like others, that to require additional vehicles when the current practice only requires one tractor/PTC/pipe trailer unit to get the job done would increase traffic and potential for accidents on farm roads.

Troy Carrington added that accidents in California have occurred in vans on farm roads, and there have not been any known accidents with PTC units, so when looking at the alternative to PTCs on farm roads, other types of vehicles seem to have greater potential for accidents. Several growers commented that they already have speed limits for motor vehicles on their roads of 15 mph, and the tractor limit is 5 mph. Any faster than that on a tractor results in a bumpy ride which no one wants to experience.

April Mackie, Ramco Personnel and the Monterey Co. Farm Bureau, stated that their operations have some different issues than the Central Valley Growers. They move irrigation pipes by hand every day in large acreages of fields and have different types of small crop fields within a large growing area. They produce a large number of crops that involve hydro seeding. For example, a 100 acre field could have up to 10 types of plantings within that large field. Each crop area has different irrigation needs so they may irrigate 2 – 3 crop areas one day and then 2 – 3 different areas the next day. It is not practicable for cost factors and with different harvest operations to install permanent irrigation systems, so they are moving pipes every day. They may operate on the North side of a ranch and then need to move the crew to the South end of a field, and it is necessary to have employees ride on farm roads between those two crop areas. Pipes are generally stored in the center area of the field so there is also a need for PTCs to travel back to that storage area on farm roads to load more pipes.

Ms. Mackie added that some areas of their farm roads can be wet, and the tractor with PTC can easily travel through damp areas, whereas other types of vehicles such as trucks and vans could not. So for them the private farm road travels with PTCs is absolutely necessary. Furthermore, she stated that global gas requirements and buyer demands prohibit any personal property and vehicles in crop areas so they must establish designated parking areas for employee vehicles. These parking areas are generally located near the pipe trailer area and employees travel back via the tractor with PTC to these parking areas for breaks and lunch and also to load irrigation pipes as needed. She stated that, even in a 100 acre growing area, there is just a 3-person crew

performing irrigation, and therefore, there is not two-way traffic or a need for other vehicles to be in those areas.

Victor Duraj, Associate Development Engineer, UC Davis, asked the growers if the tractor and PTC are ever used without the pipe trailer attached. Amy Wolfe, AgSafe, stated that sometimes that is the case. For example, if pipe has already been laid but a problem such as a leak occurs, the crew may go out by tractor with the PTC to fix the leak or address similar problems. Joel Sherman added that sometimes they may need an additional pipe trailer so a truck will go out to the field to get the trailer for use in another area and the employees would then ride back to the storage area via tractor with attached PTC only. He clarified that PTCs are only used in irrigation operations and no other types of operations. The Chair asked if the Division or CRLA had any comments about grower statements regarding the necessity to operate PTCs on private farm roads.

Eric Berg stated that the operation of PTCs on private farm roads presents more hazards than operation on furrowed crop fields. For example, the tractor may need to pull to the side of the road to let other vehicles pass making it more subject to a side rollover. He continued that the Division feels it is necessary to have more engineering information and studies about the design of PTCs and their ability to withstand impacts from rollovers or collisions. The Division has been working with Grimmway Farms to obtain more engineering studies relating to various potential collision or tractor upset scenarios.

Joel Sherman stated that Grimmway intends to provide the Division with long-term traffic studies regarding the number and kind of vehicles that are encountered on farm roads (e.g. passing situations and encounters at farm road intersections) during irrigation activities. Mr. Sherman stated, notwithstanding Division concerns, that because of the nature of their operations, slow speeds, travel on relatively level fields/roads with good visibility, the potential for tractor accidents with PTCs attached is greatly diminished when compared to other typical agricultural activities that involve the use of tractors.

The Chair asked Roberto Botello, an employee for Grimmway Farms for 13 years, how he and his co-workers felt about irrigation work that involved riding in PTCs. Through an interpreter, Mr. Botello responded that they work long hours, and without the PTC, it is very difficult to walk through disked/cultivated fields. He also said the PTC helped them work more effectively and efficiently.

Emanuel Benitez, a community worker for CRLA, stated that there are conditions in the Coachella Valley of California where crops are grown at different times of the year, so you can have harvesting activities at the same time that irrigation operations are taking place in a nearby field. In such cases there can be a number of vehicles on the nearby farm roads so the passing of vehicles occurs. However, he was not aware of any accidents in these heavier traffic areas.

Mr. Benitez stated that he had experience in placing and removing irrigation piping in lieu of PTCs. It was his experience that walking provided a rest period from the harder tasks of setting or pulling piping and that to ride in a platform or carrier resulted in less rest time between

arduous tasks. However, Roberto Botello stated that during a long day, it was preferred to ride in a PTC, especially between different crop fields that can be 1 to 1½ miles walk in the hot sun.

Mr. Benitez also stated that the practice of using pipe pulling equipment is more efficient for laying piping or removing it then walking next to pipe trailers. Joel Sherman stated that Grimmway has some pipe pulling equipment, but the main problem is that pipe pulling is a relatively new technology and the plastic type piping is in high demand and very hard to purchase². Grimmway has been using a product called “Yelomine” when they can get it, but it may be 10 to 15 years before all growers would be able to use it and there is a great expense associated with converting to this type of piping system (e.g. Grimmway has approximately 15,000 miles of aluminum irrigation piping). It was stated by one member, that the availability of this product does not solve the issue at hand, which is the use of PTCs. Further, Wes Selvidge said that this kind of system is not suited for crops like potatoes that have an aggressive vine. Even with a pipe pulling system, Joel Sherman stated you still have a pipe storage area and a need to get the equipment, piping and the workers out to the irrigation fields and back to the storage area so the pipe pulling system does not solve all the issues. A tractor, with PTC and pipe trailer, does all that efficiently in one unit.

Marley Hart, talked about alternatives, such as the Yelomine brand piping system and that nothing prevents any movement toward using this technology as it is not prohibited that she is aware of, but to mandate its use in lieu of PTCs could require Department of Finance approval, which would be somewhat problematic given the lesser cost factors of PTC use and the lack of accidents.

Norman Groot, Monterey County Farm Bureau, stated the Salinas Valley area is under a great deal of pressure to resolve fugitive dust problems which are monitored by agencies like the air quality control districts. Any additional vehicles on farm roads compound the dust problems and puts growers at odds with other agencies.

Eric Berg discussed issues regarding the design of PTCs and stated that because accidents have not happened in the past does not mean they could not happen in the future. The Division believes that PTC units require a certain acceptable minimum level of protection in the event of collisions or rollover accidents. If a regulation permits their use on a broad basis, he indicated that eventually there would be serious accidents that administrative controls would not prevent. The Chair asked if the Division knew the design criteria it was seeking. Mr. Berg stated that the Division is currently working with Grimmway Farms regarding those issues. One committee member asked Mr. Berg if the Division was thinking that the PTC would have to meet the design of say a pickup truck. Mr. Berg stated no, that the Division is aware trucks have the capacity to travel at much greater speeds than tractors and that they would be looking at certain hazards up to a maximum velocity of the tractor traveling approximately 15 mph.

² According to some committee members, irrigation piping is installed in the furrowed crop rows with pipe puller machines powered by a stationary tractor and the machine pushes or pulls the plastic piping which is installed section by section that fit into each other to form one long continuous lateral water line.

Bryan Little, Farm Bureau, asked if tractors were required to have collision design criteria beyond the ROPs. Dr. Cavaletto stated that he was unaware of any such standard that would have those requirements. Most tractor operation is in off-road situations so it is assumed that they are traveling at slower speeds and collisions would typically be minor damage. When traveling at slow speeds the design of the tractor regarding impact is not a factor.

Dr. Cavaletto stated that some impact studies have already been done for the Grimmway Farm variance regarding PTCs with the example of a Ford Truck, Model F-150 traveling at 5 mph colliding into a PTC. At those slower speeds, there would be some damage to the PTC and permanent deformation of several inches, but the deformation would not go into the PTC passenger sitting zone. Furthermore, he felt the probability of a truck/motor vehicle directly hitting the PTC would be low and more likely a vehicle would also make contact with some part of the tractor such as the wheels. He stated that part of the problem with trying to develop design standards for equipment such as PTC involves the numerous variables such as the speed and type of impact and this can be somewhat of a moving target. He stated if a tractor rolls over sideways, when the frame of the PTC is within the wheel base of the tractor, the tractor's ROPS and wheels would absorb much of the impact.

Victor Duraj discussed some of the features on many tractors that include 3-point hitch "draft controls" (vertical up or down movement) when an object is hit, and "sway controls" (side to side movement of equipment attached to a 3-point hitch). It was stated that many tractors have these controls. After some discussion it was pointed out tractor operators should be aware of these controls and how they work but that at very slow speeds of 2 to 5 mph for PTC travel that to require these controls was likely not necessary.

The Chair began discussion of necessity for a rulemaking action and stated from the first day's discussion thus far that there is a need to proceed with a rulemaking action to address the use of PTCs that would provide consistency for how they are used. He recommended that the committee proceed to reviewing the draft proposal included in the invitation. The Chair indicated from the discussions thus far that PTC use on private farm roads seemed an integral part of the irrigation operation and suggested that language for both crop fields and road travel be reviewed.

Michael Meuter, said that CRLA was opposed to proceeding with a rulemaking, especially a proposal that would permit the use of PTCs combined with the tractor on any private farm roads. He felt that the discussions identified effective alternatives and that necessity had not been established. He stated that he had heard mostly business reasons, as opposed to safety reasons, for permitting PTC use in lieu of more traditional transportation vehicles, such as trucks and vans. Although he acknowledged that April Mackie of Ramco had pointed out that traditional vehicles would not be able to travel in some small number of fields where roads are not passable with motor vehicles. April Mackie clarified that the issue is applicable to many large fields that have smaller crop fields within large acreage areas.

Mr. Meuter further stated that the one neutral body in this matter is the Standards Board. With respect to the Grimmway Farms request for a variance to operate PTCs in the crop fields and on

farm roads, the Board's Decision reflected that equivalent safety had been demonstrated for private farm road use. Board staff clarified that the Standards Board did grant the variance for crop field use and not for farm road use. This Decision was based on the information and variance request presented by Grimmway and does not reflect that there is no future mechanism that could provide means and methods to achieve equivalent safety for the use of PTCs on farm roads.

Joel Sherman pointed out that the portion of the permanent variance for PTC use on farm roads was denied by the Board without prejudice, and in the Board's Decision, it stated that Grimmway would not be precluded from such a request for PTC use on farm roads in the future. Mr. Sherman further stated that they are working with the Division to provide more information and studies related to the use of PTCs on farm roads. Michael Meuter stated that we should wait for those studies to be completed before proceeding with a rulemaking. Eric Berg stated that tractor operators are afforded the benefit of ROPS and that he felt design criteria for rollover and collision protection should be included in any proposal for farm road use of PTCs.

Joel Sherman commented that one must consider the alternatives to the use of PTCs and that he could not be convinced that employees riding on ATVs or in the back of pickup trucks under certain conditions (both of which are permitted) is equivalent to employees riding in a PTC. Will Creger was of the opinion in the absence of PTC use that there would be walking, use of ATVs and riding in pickup trucks and that employees would be tempted to ride the fenders of equipment. He agreed that the use of PTCs is safer than some alternatives.

April Mackie discussed how widely PTC systems are used in some geographical areas. For example, between San Bernardino and Santa Cruz Counties and the Salinas Valley, PTC systems, when permitted, would be used on a daily basis in roughly 270,000 production acres. Mr. Meuter stated that he is from Monterey County and that he believes that the overwhelming number of production areas are still accessible by trucks to transport workers and that there are unique, much smaller areas/acerages where farm roads cannot be accessible with trucks.

The Chair summarized that, according to Ms. Mackie, there are a number of areas and situations where tractor PTC units provide accessibility for irrigation activities that could not be accessed by trucks or other traditional vehicles. Larry Williams, Hall Agricultural Enterprises (Farm Labor Contractor), stated that they operate in 26 counties and have approximately 5,000 employees at any given time. Many field production areas require year round irrigation and without a tractor they cannot get into them. Even where access is possible with trucks, it is very difficult since the Cal/OSHA ban on the use of PTCs. They use trucks, ATVs, and mule utility carts to transport workers and these alternatives are not as safe as PTCs in his opinion. The trucks are shuffled from field to field and the timing for effective use is an issue. Mr. Williams stated the use of PTCs is the best alternative and they want be able to use them in the safest manner.

The Chair stated that, unless there were objections, the committee should start review of the draft proposal, notwithstanding and noting that the Division and CRLA had expressed concerns

previously discussed. The Chair stated the proposal is based in large part on conditions required of Grimmway Farms for its temporary variance.

The committee began with discussion of the need for definitions related to PTC use. The committee agreed to language as outlined in the attached proposal to these minutes. Carl Borden stated that the definitions in Section 3649 refer to different types of tractors such as agricultural tractor, industrial tractor, industrial tow tractor and that for clarity the term agricultural tractor should be used throughout the proposal or it should be made clear that when the term “tractor” is used in subsection (i) that it means “agricultural tractor.” The committee agreed and therefore, subsequent to the meeting the Chair modified proposed Section 3441(i)(1) accordingly.

It’s noted that the definitions were originally included in Section 3649. Section 3649 in part, pertains to tractors. However, subsequent to the committee meeting, the Chair determined that the best place for the definitions of this proposal is in Section 3437, related to agricultural operations and the proposal is modified accordingly.

The committee began review of Section 3441(i)(1), regarding the scope for the use of PTCs. It is noted that in post-committee evaluation, the Chair determined that the last two sentences of this subsection were related to operational duties of the tractor operator (e.g. remaining in the seat while the PTC is in motion and shutting off the engine before dismounting) and were moved to the Operating Conditions subsection (i)(5)(B).

It was discussed that the use of PTCs should be in the fields of low-lying row crops with several examples given. However, Wes Selvidge stated that Buttonwillow’s farm operations include using PTCs in pistachio orchards, which are not low-lying crops and there may be other types of orchard operations.

Michael Meuter stated that operation of PTCs for part of the Grimmway variance was focused on the clear visibility of operating PTCs in low-lying row crop areas and CRLA would be opposed to omitting that limitation. Eric Berg stated the Division agreed with Mr. Meuter’s comments. The Chair stated that discussing the use of PTCs for orchard operations went beyond the scope of previous discussions about the use of PTCs in row crop fields and he also had visibility and possibly other concerns. Dr. Cavaletto stated that the Grimmway variance is restricted to just row crops, but the Petitioner’s may be looking at the use of PTCs in a broader range of agricultural operations which the committee may want to consider and determine if visibility issues can be mitigated. Carl Borden suggested consideration of permitting PTC operation in areas where the crop heights do not limit the visibility of tractor and/or vehicle operators. Another member suggested a specific height limit, however, others stated the height could be arbitrary and very difficult to determine at any given time.

The Chair stated that he had envisioned the operation of PTCs in row crops like carrots, radishes, onions, strawberries and tomatoes and asked how many growers are using PTCs in orchard operations or near orchards, or in other high profile crops like fruit trees, nuts etc.? One grower stated that there may be a mixture of high and low profile crops in certain agricultural areas. April Mackie clarified that PTCs and tractors would generally not be able to travel through

orchards and other high profile crop fields anyway but that in getting to low-lying crop areas on farm roads (should that be permitted) the PTC may pass by fields with higher growing crops.

Several members suggested that a definition of “low-lying row crops” could be added to clarify the scope of the proposal. The committee agreed and developed this definition for Section 3437 as provided in the attached proposal for subsection (i)(1). Time running out, the Chair adjourned the meeting for the first day.

Day Two – May 22, 2014

The Chair opened the meeting and summarized the discussions from the day before. Upon questions from the Chair, Michael Meuter stated that CRLA would be more open to supporting and considering a committee consensus that would narrow the scope of any rulemaking action to the use of PTCs in furrowed crop fields only. Eric Berg stated that the Division would support a proposal for PTC limited to crop fields at this time, provided that the design regarding some structural support and overhead shade of the units was similar to those PTCs used by Grimmway Farms.

The Chair also asked the university-based agricultural specialists similar questions to those of the Division and CRLA regarding use of PTCs in crop fields versus on private roads. Victor Duraj, UCD, stated that he believes the PTC is a benefit to workers and should be permitted in furrowed fields subject to conditions. However, he stated concerns about farm road travel. He stated that PTCs have been used for a long time without known injuries. However, the tractor manufacturers have taken the position to not support their use based on safety and liability concerns. This does not mean that, with additional studies, evaluation and more information (e.g. the Grimmway Farms current request for a temporary variance to permit private farm road travel) regarding the design, traffic flow studies on farm roads and transition from fields to roads, that California could not provide a standard for the use of PTCs on farm roads.

Dr. Richard Cavaletto stated that PTC use in crop fields has merit. The issues such as collision, rollover, safe speeds and the major hazards the committee discussed are in large part, addressed in crop fields. Additionally, the PTC provides workers rest, shade, water and relief from walking through rough terrain etc. Also, administrative controls are less of a concern in the field operation of PTCs. He stated PTC use on farm roads introduces more variables with respect to administrative controls and the employer’s ability to implement controls. A set of safe work practices that are effective yet not overly cumbersome would go a long way to help the growers have safe systems in place and assist the Division with ensuring compliance.

Dr. Cavaletto stated one of the advantages of moving forward in the study of these devices is to provide some consensus about the design and minimum structural strength. Some of these units are fabricated without guidelines as to what is required. He stated that providing appropriate design criteria will result in good construction practices.

The committee resumed discussion of the proposal beginning with subsection (i)(3) that limits the slope of fields/terrain where PTCs are used to no more than a 5 percent grade (5% grade).

Several members discussed that the grade is the rise over the run. For example a 5% grade would mean that a measurement of the slope up or down would be 5 feet over a 100 foot distance. The Chair and the Division stated that, in the Grimmway variance, the 5% slope limit was intended to keep PTC operation on relatively flat or level ground. One committee member stated that for the most part crop fields are level. The committee agreed that the 5% grade was represented correctly and agreed to retain it in the proposal.

The Chair stated that he had questioned a number of growers prior to the meeting about the design criteria used to construct PTCs. There was a wide range of answers. Some were purchased with the land or were built in their own shops and in some cases, were fabricated by a third party. The Chair repeated that there is no national consensus standard that addresses the design of PTCs. The Chair explained that is the reason why subsection (i)(4)(A) requires that PTCs be approved for their intended use as provided in GISO Section 3206. Section 3206 provides reasonable assurance that PTCs are subject to adequate designs with good engineering principles. The Chair stated the term “approved” is used in a number of Title 8 standards including those where there is no consensus standard for guidelines to ensure a level of good engineering principles for the intended use of devices and equipment.

The Chair asked if PTCs should be required to be designed by a professional registered engineer. Joel Sherman stated that Grimmway has been working with an outside firm to establish the appropriate design. However, it has been a challenge to know exactly what that design criteria should be given that there is limitless tractor and PTC in motion scenarios that could present a hazard, none of which has ever happened for them, but which are of concern to the Division and the Board. Eric Berg stated that the units should be designed for everyday stresses and strains but also for certain failure scenarios which have the potential to happen. The committee agreed that the requirement for “approval” of PTCs would ensure a reasonable level of safe design that allows the Division to request additional information if necessary.

The committee discussed whether the PTC design should be required to have a top cover to provide shade. However, the growers stated that they do not rely on PTCs to provide the shaded areas required by Section 3395 for the prevention of heat illness. Carl Borden stated that depending on angle of the sun, the roof may not provide any protection at all. Joel Sherman stated that the PTC top cover provides a cooling benefit but is not used in lieu of the shade required by the heat illness prevention standard in Section 3395.

The Division stated that the benefits of partial shade in a PTC were part of the Grimmway variance, and Eric Berg said the cooling effect it provides should be provided. Michael Meuter stated that CRLA supports the requirement for a top or cover on the unit for the additional shade that it would afford at certain times of the day. In post committee evaluation of the issues, Board staff believes that a cover/roof on the top of PTCs is a worker benefit that provides relief from the sun when it is in certain positions, particularly when overhead. Growers repeatedly referred to shade as part of the rationale to permit their use. [See proposed subsection (i)(4)(L)].

The committee discussed whether the requirement for ROPS on tractors is expected to protect the passengers in the PTC, given the operating conditions and administrative controls would

mitigate the possibility of upset or rollovers. Victor Duraj stated it is not so simple to state that the ROPS on any tractor would provide protection for the PTC. Dr. Cavaletto made similar statements that variables would have to be evaluated, such as the width of the PTC in relation to the tractor wheels and the height of the tractor's ROPS.

Carl Borden questioned if the fields/roads are relatively level, then why would the tractor be required to have ROPS? Dr. Cavaletto stated that the tractor is not just used in the PTC irrigation operations, and ROPS are necessary for operator protection in other areas, slopes, where there is uneven terrain, ditches etc. Joel Sherman stated that he would not remove ROPS from any tractors, and they do not impede irrigation operations in any manner. He also believes they provide additional safety in the rare event that a rollover or collision might happen.

Victor Duraj stated that, in the furrowed fields, there is little if any chance that the tractor would overturn, but on farm roads, other factors and hazards are introduced such that it is not known yet under what conditions the tractor will overturn and what will happen to the PTC and passengers if it does overturn. He stated if we can obtain more information about those issues then the risk factors could be addressed such that manufacturers may be willing to get involved in how these units can be used in fields and/or farm roads in the safest manner.

Eric Berg stated that for farm road travel, the Division believes ROPS protection or equivalent should be provided and studies are being formulated for the Grimmway experimental variance on farm roads. He felt an engineer should be able to evaluate if the ROPS on a tractor would provide adequate protection for the PTC. Joel Sherman stated that the Division is currently setting forth collision and rollover studies with variables such as potential side collisions with a heavy service truck, rear axle rollover, rear vehicle impact and variables that include the pipe trailer loaded or unloaded. He stated the studies are specific to Grimmway's use of PTCs. The Chair stated that those engineering and traffic studies have significant cost impact for Grimmway Farms and that if each grower would be expected to undergo those costs, it is doubtful that PTC use on farm roads would be feasible.

Dr. Cavaletto clarified that we are at a prototype stage and need that data and understanding but from a realistic standpoint once those criteria and parameters are established for the use of PTCs on farm roads, we should be able to apply similar principles to the general PTC design for other growers without them having to incur the type, extent and cost of engineering and traffic studies that Grimmway has undergone. Joel Sherman stated that it's likely that most PTCs have been built using historical data and design, and that once these units are built, they are very durable. If there are repairs, they are relatively minor tack welding, but structurally, they are quite sound overtime.

The Chair stated that the engineering and traffic studies that Grimmway will be undergoing for its experimental variance with the Division will take time, not including the duration of the variance, should the Division grant it. Joel Sherman estimated that the experimental variance process could take from 9 months to a year.

The Chair commented that, to undergo a rulemaking action at this time to include PTC use on farm roads, is likely getting the cart before the horse because the Standards Board members would not yet have the benefit of reviewing the results and studies of the experimental variance before voting on a final rulemaking for all California. The Chair stated there was a consensus among the parties for the operation of PTCs in the crop fields, and he questioned the growers if they would like to proceed with a rulemaking action with that limitation. He did not believe that a rulemaking that included farm road use at this time would be acceptable to the Division, and the Board still had concerns about farm road travel, as stated in the Grimmway variance Decision.

Troy Carrington stated that use of PTCs on farm roads is critical for Bolthouse Farms irrigation operations using PTCs, and they would consider requesting a temporary variance for that activity if a rulemaking permitting farm road travel is not imminent. His recommendation was to proceed with a rulemaking that is limited to crop field use of PTCs at this time, as suggested by the Chair.

Norm Groot, Monterey County Farm Bureau, stated that they also support both field and farm road use of PTCs but in the absence of their use on farm roads being included, they would support the rulemaking for crop field use of the units. The Chair agreed this approach had merit and that CRLA and the Division were inclined to support a rulemaking with the limited scope for the use of PTCs in furrowed fields only. The consensus then was to proceed with rulemaking permitting the operation of PTCs only in furrowed crop fields. The committee resumed review of the proposed text.

The committee made revisions as shown in the draft proposal to subsection (i). Michael Meuter felt that language was necessary for subsection (i)(2) to clarify that the operation of PTCs is permitted only in the furrowed area of fields and this subsection was revised accordingly with committee agreement.

The Chair stated that the committee agreed to the language in subsection (i)(4)(A) regarding the word “approval.” The Chair stated that there are variations in some of the designs of existing PTCs that have been in use. Dr. Cavaletto asked if existing units would be grandfathered in in some manner that would not require costly and extensive engineering analysis. He stated for PTC use in furrowed crop fields only, the units are subjected primarily to the trailer load, pull forces, and vibration of everyday use on relatively flat fields.

One committee member repeated that the PTC units of many years have been very durable and structurally, there is not a history of hazardous structural failures. Eventually the committee agreed to language in subsection (i)(4)(B) that, for existing PTC units, a qualified person would inspect and approve the PTC units for structural integrity and design. Next, the committee discussed proposed subsection (i)(4)(C) regarding the seat belt requirements for PTCs. It was discussed that Section 3563 “Seat Belts” requires that tractors must meet SAE J386 Jun85 or Jun93. In post committee research the Chair found that the SAE J386 “Operator Restraint System For Off-Road Vehicles Work Machines” is the primary standard for tractor seat belts and/or seat belt replacements. Joel Sherman stated that Grimmway is using the same seat belts

for the PTCs that are provided for the tractor by the manufacturer and that could be an effective option. Therefore, proposed subsection (i)(4)(C) provides two options for the installation of seat belts.

The committee agreed on language for subsection (i)(4)(D) and (E) regarding access steps, handholds and entry/exit openings. Although the committee suggested that the chain, door or gate protection should have a minimum strength requirement, the committee was undecided as to what that requirement should be. In post-committee evaluation, the Chair modeled the strength requirements for access openings consistent with the 200 pound strength required for ladderway openings in guardrails located in GISO Section 3212(a)(2)(B)2.

The committee discussed the need for protection at the entry/exit openings of PTCs and for the installation of seat belts given that the PTC and tractor would likely not travel more than 5 mph and much less in crop fields. The committee felt that both of these protections would be required should further rulemaking take place to address private farm road travel and in the event that an employee forgot or did not wear his/her seat belt. Consequently, both protections remain in the proposal. The committee agreed to the communication requirements in subsection (i)(4)(F) with verbal communication being acceptable provided the tractor operator has a clear line of sight to the PTC passengers.

Regarding possible provisions of subsections (i)(4)(G) and (H) referring to ASTM and AWS standards for steel tubing and welding repairs respectively, the Chair asked if these references were necessary if PTCs are approved in accordance with Section 3206. One member stated that these ASTM and AWS standards may not be readily available. It was discussed that the design must be approved and that would cover the type of materials used in the construction of these units. It was discussed that the existing units can be made of a variety of steel materials that are adequate but that they may not meet the specific sections referenced in the consensus standards. Dr. Cavaletto questioned the need to reference specific consensus standards and stated that it is important that the PTCs are made of steel and the approval requirements of subsection (i)(4)(A) would ensure the appropriate materials are used. The committee agreed the subsection was too restrictive and should be more performance-based. Eric Berg suggested that subsection (i)(4)(G) could state that the PTC shall be constructed of steel. The committee agreed and drafted language for this subsection in accordance with the attached proposal.

The Chair noted that the welding standards referenced in the draft proposal came from the Grimmway variance and that they were very expensive to order and likely, a performance based requirement should be considered to the effect that welds must be made by a certified welder, for instance. However, Joel Sherman stated that a certified welder would have to pass a national recognized certification course. Others stated that many qualified welders do not have this certification and certification may be limited to a specific type of welding process. Victor Duraj mentioned that it is problematic with respect to hundreds of existing PTCs that it could not be known if welds were made by certified welders. The committee concluded that welding affecting the structural integrity of PTCs should be performed by a qualified person as an effective alternative as shown in subsection (i)(4)(H).

The committee agreed to subsections (i)(4)(I) and (J) as stated in the attached, current version of the proposal. With respect to seat cushions for PTCs, Victor Duraj stated that there should be some thickness requirement. Eric Berg stated that the Grimmway permanent variance required seat cushions to be a minimum thickness of 1.5 inches for the comfort of passengers wearing seat belts. Troy Carrington stated that the installation of seat cushions is minor and easily accomplished. The committee agreed that the 1.5 inch thickness for seat and back cushions would provide a reasonable level of comfort and that there was no need for a future phase-in effective date.

Victor Duraj asked if the PTC should be required to have some type of protection on the back of the unit for protection in the event that pipes slide forward. Growers stated at 3 mph in the crop fields there really was no chance that pipes would slide forward. However, the Chair noted that this should be a consideration in any further rulemaking that would address the use of PTCs on private farm roads.

Joel Sherman stated that the proposal restricts the number of persons who can ride in a PTC to three, which was taken from Grimmway's practices, but he is aware that other growers like Bolthouse Farms sometimes carry four people. The Chair posed the question as to whether there is a safety reason to limit the number of persons riding in the PTC. Eric Berg stated that, as the PTC gets wider to accommodate more seat belts, it has the potential to extend beyond the tractor's wheel base and get outside the potential protection the tractor ROPS might afford. Carl Borden suggested limiting the width of the PTC. Joel Sherman stated that the wheels/tires are the part of the tractor that would potentially absorb part of the impact in the event of a side rollover. The committee determined that the PTC width should not extend beyond the outside edge of the tractor's tires. The committee concluded that a specific limit on the number of passengers is unnecessary [see subsection (i)(4)(K)].

The committee began reviewing the "Operating Conditions" of subsection (i)(5). Michael Meuter stated that tractors used with PTCs should be equipped with ROPS. The committee agreed, and there was a consensus to include this provision as subsection (i)(5)(A). The language for subsection (i)(5)(B) was agreed upon in the previous discussions. The committee discussed whether it should be stated that riding in PTCs is prohibited on public roads or highways and on farm roads, given that subsection (i)(2) already comprehensively states employees shall ride in PTCs only in the furrowed area of fields while performing irrigation activities. It was discussed that subsection (i)(2) provides the limitations for use, and to list where PTCs should not operate would inevitably omit something and cause confusion.

The committee agreed to the speed limitation of 5 mph as specified in subsection (i)(5)(C) and retained the provisions in subsection (i)(5)(D) and (E). Victor Duraj felt that the reference to staying clear of slopes exceeding 5% in subsection (i)(5)(F) was unnecessary and confusing given that the operation of PTCs on slopes is already addressed in subsection (i)(3). The committee agreed and omitted this reference. Only minor editorial changes were suggested for subsections (i)(5)(G) and (H), as represented in the attached proposal.

Dr. Cavaletto asked for clarification about the last sentence in subsection (i)(5)(I) that stated PTCs shall not be used for hauling materials. Growers stated that unoccupied PTCs are sometimes used to haul stakes or seeds and other items. The committee agreed to insert language in the first sentence of this subsection to the effect that the provisions applied to occupied PTCs. The Division felt some provision should be included that the haulage of materials in a PTC with no passengers should not damage the PTC. There was considerable discussion regarding the need for this addition. One issue was the difficulty in knowing how much of a load the Division would determine is too much. Growers did not expect to be hauling heavy materials in these units. It was stated that there is no employee exposure to danger on a PTC unit that is not occupied. Given that the daily inspections are required prior to use of an occupied PTC, the last sentence was omitted.

The committee discussed subsection (i)(6) “Inspections.” The Chair asked if a specific periodic inspection of PTCs should be specified from the perspective of a more in-depth inspection than the daily inspections required in subsection (i)(6)(A) and (B). Joel Sherman indicated the daily inspection provisions are consistent with their operations. Dr. Cavaletto stated that, as long as there are no visible deformities and/or cracks in the units, the daily inspections provide a list of common problem areas short of doing destructive-type testing. The committee recommended keeping subsections (i)(6)(A) and (B) as indicated in the draft proposal.

The committee discussed the training provisions in subsection (i)(7). One subject was the experience of tractor operators on the irrigation crew. Joel Sherman stated that their tractor operators are all experienced and that those on the irrigation crew rotate positions so that more than one employee is qualified and operates the tractor. Several members mentioned that Section 3664 already requires the training and operating rules for tractor operators. It was the opinion of the committee that to require a certain number of hours or months of training was not an effective or practicable measurement of operator skill. In addition, proposed subsection (i)(8) outlines several conditions specific to the operation of tractors with a PTC for both the passengers and the tractor operator. Therefore, the reference to the length of training in months for tractor operators was omitted.

This concluded the review of the draft proposal. It was discussed that it is not expected that this rulemaking would impose any costs to affected employers because the practice of riding in a PTC during irrigation operations is not mandated but rather an option that employers may choose to use. The Chair explained the rulemaking process and that the committee members would receive a copy of the revised proposal developed subsequent to the meeting and the meeting minutes.

There being no additional comments or questions from committee members the Chair then adjourned the meeting.