FIRST 15-DAY COMMENT PERIOD

2-1	We support the proposed change in section 6450 which clarifies that supervision the fumigation operation is a fumigation handling activity. However, the term might more appropriately be "fumigant-handling" activity. ***The Department of Pesticide Regulation (DPR) feels "fumigation- handling" activity is the appropriate term.***	32A
2-2	Increasing the application blocks to more than 40 acres is in fact weakening of the protection rules and resulting in increased risk to the workers and the public. ***Buffer zones increase in size the amount of acreage increases. Fumigations larger than 40 acres will have the same level of protection as those less than 40 acres.***	2A
2-3	We support the Director's flexibility regarding the application block size. There are certain situations whereby larger acreage may be able to be applied without increasing the possibility of risks. ***DPR agrees.***	31A
2-4	We oppose the revision that would allow application blocks to exceed 40 acres if approved by the Director in part because we are unaware of any air monitoring data available for field fumigations of such vast areas that would justify such a large application block. ***See response to comment #2-2. In addition, DPR lacks specific monitoring data for many field sizes less than 40 acres. DPR relies on computer modeling to supplement air monitoring data and to determine buffer zones for all field sizes.***	32A
2-5	DPR revised section 6450(e) to allow an exception to these requirements for experimental research purposes covered under a valid research authorization issued pursuant to section 6250. What percent of "valid research authorizations" are ever verified in the filed by DPR personnel? What would prevent abuse of this loophole (simply filing a research request and ignoring tarpaulin regulations altogether)? The regulation should contain a feedback correction mechanism to increase verification activity (and fines) for overuse of this loophole. ***DPR does not conduct inspections of applications requiring a research authorization (RA). Inspection of pesticide applications requiring RAs and RA record audits are a function of the county agricultural commissioner's (CAC's) inspection activities. Title 3, California Code of Regulations (3CCR) section 6260***	21A

	requires written authorization from the director prior to any experimental, unregistered use of a pesticide. DPR conditions RAs requiring researchers to comply with research protocol and 3CCR relative to RAs. Non-compliance of RA conditions is a violation of Food and Agricultural Code (FAC) section 12991(e). Verification of the use of pesticides requiring RAs is accomplished by mandatory 24-hour notice of intent to the CAC prior to said use. Mandatory submission of an Experimental Trial Report to the CAC 24-hours prior to either harvest or destruction of the crop is required by 3CCR section 6264 (a) and 6266 (a) respectively. Additionally, section 6264(b) requires researchers to forward Experimental Pesticide Use Reports to the DPR Registration Branch. The Experimental Pesticide Use Reports are reviewed, tracked and placed in a statewide database. A review of RA statewide database shows that DPR approved and issued four RAs for methyl bromide during the fiscal years 2002 and 2003. Of the four, only two RAs were used for a total of 5.86 acres. Current DPR data does not indicate an abuse of the RA requirements.	
2-6	The proposed regulations prohibit the use of films less permeable than the standard defined in section 6450(e). We believe that this prohibition negates the incentive of industry to develop new and better films. The California Strawberry Commission is currently setting up trials to develop the data needed to use "virtually impermeable films" in California; however, use of such films would be prohibited under the new regulations. To allow some flexibility in introducing new and better films, DPR should rewrite the entire section 6450(e) to read: "Except for experimental research purposes pursuant to a valid research authorization issued according to section 6260, all tarpaulins shall be approved by the Director." As an alternative, section 6450(e) should be modified to allow the Director, after review of data, to approve films that fall outside of the standard. The following should be inserted in section 6450(e): "After a review of data, the Director may approve tarpaulins not included in this standard, if it is determined that use of these films will not result in an adverse impact on health or the environment." ***Methyl bromide applications using tarpaulins that do not meet the current permeability requirement would require a regulation change even if DPR had flexibility to allow other tarpaulins. Using tarpaulins that do not meet the current permeability requirement would likely necessitate changing several provisions of the regulations, such as the buffer zone size (particularly the emission ratio), the buffer zone duration, and the restricted entry interval. Additionally, applications using tarpaulins that do not meet the current permeability requirement would need field monitoring data as supporting information.***	30A, 31A

2-7	We support the regulations specifically identifying that special provisions may apply in situations of approved research. Tarpaulin development continues and increased retentio n capabilities of tarps need to be effectively field tested. ***No response necessary.***	31A
2-8	Revised section 6450.1(b)(1) requires written notification to be in both English and Spanish, and section 6450.2(g) has been modified to require notification to be given to employees on adjoining agricultural properties be in a manner that the person can understand. The state language is English. We have enough overly burdensome regulations as it is. Let's save regulations for things that matter. ***Subsection 6450.1(b)(1) requires written notification to be in both English and Spanish, or by other means approved by the commissioner. Since the notice is required to be provided to properties that contain residences, and DPR made the determination that many homeowners in methyl-bromide use areas are Hispanic, DPR added the requirement that notices also be provided in Spanish. The commissioner can approve other means of notification, such as verbally notifying the property operator in English.*** ***The requirement in 6450.2 that notice to employees be "in a manner they can understand." is consistent with employee notice requirements elsewhere in existing regulations, specifically 3CCR, sections 6618 and 6619. Therefore, employers already have to meet this standard. Because a large percentage of California farmworkers do not speak English, providing them an English-only notice would be meaningless.***	21A
2-9	Support the revision that requires written notification in both English and Spanish but note that it falls far short of the improvements we have previously recommended. ***The regulation does not limit the notification to the English and Spanish language. A description of the notification procedure must be submitted as part of the worksite plan prior to issuance of a permit. The CAC can condition the permit's notification requirements that are most appropriate based on local conditions.***	32A

2-10	DPR adjusted the emission ratio for the deep tarped method of application from 0.4 to 0.25. This move is in the right direction; however, in previous comments submitted on December 18, 2003, we provided data supporting an emission factor of 0.20. ***The objective of the submitted study was to determine, and the study verified, that the emission ratio for deep/tarp applications was no greater than shallow/tarp (emission ratio 0.25). Determining the exact emission ratio for deep/tarp fumigations, or if the emission ratio was less than the emission ratio for shallow/tarp fumigations was beyond the scope of the study.***	30A
2-11	DPR revised the buffer zone requirements (emission ratios in Table 1) for tarp/deep/broadcast fumigations based on new monitoring data submitted to DPR. Who submitted the "new monitoring data"? Is there a conflict of interest here? ***The data was added to the list of documents relied upon. The Alliance of the Methyl Bromide Industry submitted the data, in addition to most of the other data DPR relied upon for this and other regulations. DPR reviews all studies to ensure that the data are valid.***	21A
2-12	We support maintaining an inner buffer zone at 30 feet. ***No response necessary.***	22A, 23A, 31A
2-13	The revised proposed regulations fail to sufficiently reduce worker exposure because they continue to allow worker buffer zones to extend into adjacent properties and across roads, and much worse, reduce the inner buffer zone to 30 feet. This revision conflicts with the Cal/EPA Environmental Justice Plan because it will have a disproportionate impact on fieldworker crews. ***There is no reason to prohibit the buffer zones from extending onto neighboring properties if the practice is carefully managed to obviate any exposure concern and with agreement from the neighboring property operator. However, the CAC approves the buffer zones and can condition the permit requirements that are most appropriate for the affected persons based on local conditions.*** ***Since DPR has data that show that this reduction from 50 to 30 feet will continue to provide adequate protection from possible acute methyl bromide exposure hazards to the public and agricultural employees, it is not inconsistent with Cal/EPA's draft Environmental Justice Plan.***	32A

2-14	We support the provision and amendments (section 6450.2(a)) allowing the revision or adjustment of buffer zones so they may adapt to local conditions so long as the safety margins are preserved or increased. This is proper because DPR's buffer zones are promulgated based on very conservative assumptions. ***No response necessary.***	31A
2-15	It is inappropriate to ever allow counties to loosen methyl bromide use requirements below the levels specified by the Department in the Methyl Bromide Field Buffer Zone Determination Document. The revised proposed regulation specification that any county must consult with the Director before approving relaxed use requirements is meaningless since it does not include a requirement for the Director to approve such deviations. ***See response to comment #47.***	32A
2-16	The specification that buffer zones must never fall below the mandated minimum buffer zones established in regulation is also meaningless for those applications for which the Buffer Zone Determination Document specifies substantially buffer zones which are substantially greater than the minimums. ***The regulations allow deviations from most of the buffer zones specified in "Methyl Bromide Field Fumigation Buffer Zone Determination" if additional information supports a change. However, the buffer zones cannot be less than the minimums.***	32A
2-17	The inner buffer zone language restricts extension of the inner buffer zone to only agricultural properties. Changing the language to allow the inner buffer zone to extend into properties at the commissioner's discretion, including vacant land, provides farmers in urban areas the same opportunity to extend their inner buffer zone, as is currently afforded to those in primarily agricultural parts of the state. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	29A
2-18	The clarification that employee notification shall be in a manner the employee can understand is a needed improvement in section 6450.2. ***DPR agrees.***	32A

2-19	Section 6450.2(g) indicates that notice should be given in a "manner" the employee can understand. The word "manner" is uncertain. Does this mean orally or written? If the employee can hear or read some type of notice, but the actual notice is not in a language he can understand how is this to be interpreted? ***Section 6450.2 (g) does not specify how persons are to be notified. If so desired, the property operator can give either oral or written notification unless the label requires both. It does not specify what language the notice has to be in. Discretion is given to the employer to give the notice in a language that his or her employees can understand. The intent of the regulation is to cover other languages other then English and Spanish.***	31A
2-20	Support this clarifying language generally in section 6450.2(i), but some word changes may be appropriate. The amendment clarifies the requirement. ***Commentor provided no alternative language. DPR supports language as written.***	31A
2-21	We have no objection to the clarification in section 6450.3 that only persons engaged in fumigation can be within the application block once fumigation commences until the restricted entry interval expires. ***No response necessary.***	31A
2-22	DPR revised work-hour tables one and two in section 6784(b)(3) to include work hours for supervising fumigation activities. Because of the short duration that supervisors spend at any one fumigation site, we feel that supervisory activities should not be included in these regulations. ***DPR disagrees with this comment. In a field exposure study, a supervisor was exposed to 280 ppb of methyl bromide during a non-tarpaulin, deep, broadcast application, exceeding DPR regulatory target value. This air level is in the range of exposures of applicators (388 ppb) and cultipacker driver (141 ppb) shown the same study. Even though this was the only exposure study for supervisor, the result indicated that supervisors could be exposed to methyl bromide at a level comparable to other work activities.***	30A
2-23	We support the amendment made to section 6784(b)(2)(C). ***No response necessary.***	31A

2-24	The amended language "in fumigation activities" in section 6784(b)(3)(B) clarifies the regulation. ***DPR agrees***.	31A
2-25	We are particularly uncertain as to the rationale and data as to why supervisors of tarped deep broadcast applications are limited to four hours, but there is no limit on supervising similar nontarped fields. ***The exposure of supervisor was obtained from a study using a non-tarpaulin, deep, broadcast application (see response to comment #2-22). For other application methods, shortest work hours for that work task were used as default for supervisors. We do not know whether the exposure is lower or higher than from other work activities. The shorter work hours are recommended for health protective purposes.***	31A
2-26	Strip fumigation is similar to bed fumigation in that there are multiple tarp edges in the field. Increased off-gassing is expected from tarp edges, especially if soil coverage is inadequate. With multiple strips, the chance that some sections of tarp edge will be inadequately covered with soil increases. It is our understanding that DPR has not conducted any air monitoring of strip fumigations or reviewed any such monitoring conducted by industry. DPR should assign an emission ratio of 0.80, the emission ratio for bedded tarped applications until air monitoring has been conducted and evaluated. Assigning an emission ratio of 0.40, the emission ratio for bare soil applications, is not adequately cautious. ***DPR has no monitoring data for strip fumigations. However, DPR has made a health protective estimate for buffer zone sizes. Strip fumigations only occur on flat fields (broadcast). The emission ratio for a completely tarped, broadcast fumigation is 0.25. The emission ratio for an untarped/broadcast fumigation is 0.40. Since a strip fumigation is partially tarped, the emission ratio is likely between 0.25 and 0.40. DPR assigns an emission ratio of 0.40 for strip fumigations. Emissions from bed fumigations are higher than flat fields likely due to the higher surface area or differences in tractor implements. This emission ratio is inappropriate for strip fumigations of flat fields.***	32A
2-27	DPR has now reduced the emission ratio for deep-tarped fumigations from 0.40 to 0.25 based on a single study submitted by Tri-Cal which compares emission ratios using deep injection and shallow injection in different parts of the same field. The emission ratio should not be reduced until additional studies are conducted to confirm the findings of this study under similar and different weather conditions. In addition, the DPR scientist who analyzed this study (Johnson 2004) observed "The concentrations below the tarp are statistically significantly different	32A

	(p<.01) with the concentrations for the deep-tarped application approximately twice the magnitude of the shallow-tarped application. This indicates that the immediate, and transient release of gas from tarp cutting would lead to concentrations approximately twice as large as air concentrations from the shallow-tarped application." While the emission ratio has been reduced for this method, the work hour restrictions for tarp cutting and tarp removal have not been tightened and remain the same as restrictions for shallow-tarped applications. ***DPR's analysis indicates that concentrations under the tarp may be higher for deep-tarped applications, but the total mass of methyl bromide is comparable to shallow-tarped applications. The comparable mass indicates that exposure to tarp cutters and removers for deep-tarped and shallow-tarped fumigations should be comparable. The work hour restrictions should provide comparable protection.***	
2-28	The only fumigation handling activity which may need to be performed during restricted entry interval is tarpaulin repair. Allowing tarpaulin cutting and removal during the REI will fail to adequately reduce worker exposure, particularly in light of the very small amount air monitoring data DPR has collected to evaluate worker exposure during tarpaulin cutting and removal. ***Section 6450 indicates that tarpaulin cutting and tarpaulin removal are two of the defined handling activities that can be performed before the expiration of the restricted entry interval (REI). As such, tarpaulin repair is not the only handling activity that can be performed prior to the expiration of the REI. DPR believes the regulations provide adequate protection for workers cutting and removing tarpaulins during the REI. The reasons are as follows:*** • ***According to the regulations, the tarpaulin must be in place and must not be cut until at least five days (120 hours) following completion of injection to the application block. This time period allows methyl bromide to dissipate from the treated area. Therefore, methyl bromide air concentrations will be reduced. The exposure of a tarp cutter who enters the treated field five days after completion of injection to the application block would be exposed to a lower methyl bromide concentration than the previous days. This is because after the tarpaulin is cut, the majority of the gas trapped between the soil and the tarpaulin is dissipated. After the required 24-hour waiting time after cutting, the residual gas concentrations experienced by workers are exceedingly low. Likewise, the reservoir of methyl bromide within the soil, though continuing to off-gas, is doing so in a declining fashion.*** • ***To further protect health of tarpaulin cutters and removers, the regulations require these workers to use a respirator or limit daily work hours. These requirements are based on exposure data obtained from a field exposure monitoring study. In this study, there were three replicates for tarpaulin cutters and 12 replicates for***	32A

	tarpaulin removers. DPR used the upper bound acute exposure (or 95th percentile) to develop mitigation measures in order to ensure a high degree of health protection for workers. DPR used an average exposure for seasonal exposure to develop mitigation measures because workers are not expected to consistently expose to the maximum concentrations of methyl bromide in a season of use.	
2-29	Allowing alternate strip fumigation during an REI with full face respirators will fail to adequately reduce worker exposure because, as detailed in our previous comments, no government agency has reviewed testing of manufacturers' cartridges or canisters in a methyl bromide atmosphere and the respiratory protection regulation currently enforced by DPR is far less protective that OSHA respirator regulations, particularly in the areas of fit-testing and medical evaluation. ***See response to comment #90.***	32A
2-30	Support general concept of township caps, remain opposed to the township cap of 270,000 lbs. per month because it is based only on controlling sub-chronic exposures to 9 ppb. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	32A
2-31	Township cap is inappropriate and unnecessary. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	6A-20A, 22A, 23A, 24A, 25A, 26A, 27A, 28A, 30A, 31A, 33A
2-32	Methyl Bromide Field Fumigation Buffer Zone Determination guidelines should remain guidelines and not be incorporated into regulations. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	6A-20A, 22A, 23A, 24A, 25A, 26A, 28A, 30A

2-33	Strongly disagree with DPR's conclusion that the proposed regulations will not have an adverse economic impact on California agriculture. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	6A-20A, 22A, 23A, 24A, 26A, 28A
2-34	Work plan should specify that the phone number on the posting sign should be a number where an application company representative is reachable immediately. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	32A
2-35	Diminishing the buffer zone in some situations is weakening the safeguards for the workers and the general population in all these so called limited circumstances. Encourage DPR to prohibit use of methyl bromide. Do not weaken regulations. Outlaw all pesticides. ***Comment is not specifically directed at the proposed action – no response necessary.***	1A, 2A, 3A, 4A, 5A,
2-36	The safety levels sought by the regulatory program and safeguards are overly restrictive and with scientific merit. DPR's position of 5 ppm has little support from creditable scientists. ***The comment is not relevant to the changes proposed during the 15-day comment period – no response necessary.***	23A