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September 23, 2015

Linda Irokawa-Otani
Regulations Coordinator
Department of Pesticide Regulation

RE: Comments on Field Fumigation regulation proposal 15-002
Proposed SIP amendments regarding pesticide emissions

Via email: dpr15002@cdpr.ca.gov

Dear Ms. Irokawa-Otani:

Thank you for providing this opportunity to comment on proposed revision to the Ozone State Implementation Plan (SIP) for regulating pesticide emissions to prevent smog formation. These comments have been prepared by California Rural Legal Assistance Foundation and California Rural Legal Assistance Inc. and are supported by 44 additional organizations.

The San Joaquin valley deserves equal protection from pesticide air pollution.

The San Joaquin valley has some of the worst air quality in the state and residents suffer from high rates of asthma. High rates of asthma are associated with elevated rates of school and work absenteeism and high medical expenses. Between 2012 and 2013 estimated pesticide VOC emissions in the San Joaquin valley increased from 16.264 to 18.283 tons per day, exceeding the SIP goal by 0.183 tons per day. This triggered requirements for reducing non-fumigant pesticide VOC emissions. Fumigant emissions also represent a significant contribution (22%) of SJV pesticide VOC emissions and 1,3 dichloropropene emissions in the SJV increased 3% between 2012 and 2013. In addition, chloropicrin and the MITC generating fumigants are potent respiratory irritants and both have been shown to aggravate and cause asthma.

In light of the severe air pollution problem and resulting health and economic impacts we remain outraged at the environmental injustice of only requiring 12% pesticide VOC emission reduction for the San Joaquin valley compared to 20% reduction for other California air basins out of attainment. The SIP must be revised to require 20% pesticide VOC emission reduction for the San Joaquin valley to insure parity with other air basins.

Emission ratings for TIF tarps are unrealistically low
DPR granted interim approval for use of Totally Impermeable Film **(**TIF) tarp fumigation methods several years ago and this approval is due to expire soon. These proposed regulation changes would make approval of these TIF tarp fumigation methods permanent and allow the emission reductions from using TIF tarps for 1,3 dichloropropene and chloropicrin fumigations to be applied to meeting SIP requirements.

In previous comments we have objected to the emission ratings (% emission reduction) assigned to fumigation methods using standard tarps because these emission ratings were derived from a handful of studies on small acreages and have not been adequately validated under real world conditions where tarps may not be installed perfectly and are subject to damage by wind, animals or bubbles of fumigant gas and environmental conditions such as higher soil temperatures may increase emissions.

A recent 2013 Monterey county incident[1] illustrates how tarp failure can and does occur. 48 of 53 field workers harvesting raspberries experienced symptoms (consistent with chloropicrin exposure) when strong winds blew tarps off a recently fumigated field that was about 420 feet from their work site. The fumigant had been introduced the previous day with fumigation completed around 2:00 pm. The crew began harvesting in raspberry hoop houses around 6:30 am the next day. Around 2:00 pm a worker noticed a bubble in the tarped field. According to weather data, winds that day reached 9.6 mph at 2:00 pm. The field was located in a valley, where wind speeds may have been higher. The bubble became a large tear, and the crew noticed an odor in the air. The type of tarp (TIF or standard) is not indicated in the PISP database.

While we acknowledge that data indicates that use of TIF tarps should reduce emission of chloropicrin and 1,3 dichloropropene to some extent compared with use of standard tarps, we dispute the validity of the very low emission ratings of 7% assigned to all chloropicrin TIF tarp fumigation methods, 10% assigned to broadcast 1,3 dichloropropene TIF tarp methods and 21% assigned to 1,3 dichloropropene TIF tarp deep injection broadcast strip fumigations.

We also question the validity of the 10% emission rating for 1,3 D shallow and deep broadcast fumigations using TIF tarps because it is based on results of a study in which TIF tarps were not cut until 10 or 15 days after application while the proposed regulation allows the tarp to be cut after 9 days.

The fumigant VOC emission ratings used to calculate the inventory are not credible and underestimate true emissions. Assigning unrealistically low emission ratings with use of TIF tarps compounds the problems in the emission inventory.

As an added concern, DPR has yet to complete the process to certify which TIF tarps maintain integrity under wet conditions though a DPR official has stated that this

[1] CDPR PISP Database: Incident 52-Mon-13

certification should be in place by the end of this year.[2]

Concerns with proposed changes to methyl bromide regulations

This proposal would allow TIF tarp use with methyl bromide for the first time, presumably so these tarps could be used with products that also contain chloropicrin or 1,3 dichloropropene. TIF tarp use would not result in any methyl bromide buffer zone or emission rating reduction which is appropriate because study results are characterized by DPR scientists as limited and variable with some data showing essentially no difference compared to non-TIF tarps.

This VOC fumigant regulatory proposal would delete the methyl bromide buffer zone table referenced in the regulations with the justification that this information is now on the labels. We object to this change on the grounds that the California specific label could be changed without opportunity for public comment or involvement by OEHHA in evaluation of the effect on worker safety. Furthermore, the larger California specific methyl bromide buffer zones are only included in web links provided on the labels and the Great Lakes Terro-gas labels include a link to an out of date DPR document rather than the current DPR methyl bromide buffer zone tables. It is vitally important to maintain the buffer zone tables in the regulation.

We also oppose the proposed deletion of the respiratory protection language from the regulation because the California label could be changed without opportunity for public comment or involvement by OEHHA of review of the effect on worker safety.

Exposure of Tarp Cutters and Tarp Removers to methyl bromide and 1,3 dichloropropene not evaluated

We are concerned that DPR hasn't evaluated methyl bromide exposure levels to tarp cutters, removers and hole burners after the 9 days when tarps can be cut and the subsequent day when they can be removed. Since data on methyl bromide emissions using TIF tarps is limited and variable and some studies indicate that methyl bromide does not degrade in soil, we are concerned that exposure when cutting TIF tarps after 9 days could be higher than when cutting standard tarps after 5 days. For added protection we recommend limiting work hours for cutting or removing TIF tarps to 3 hours per day from fields treated with products containing more than 50% methyl bromide and requiring an aeration period of 48 hours after tarp cutting for these applications. We do not recommend relying on respirators for reducing exposure to methyl bromide because we have concerns about efficacy of the cartridges labeled for methyl bromide use that we have detailed in previous comments.

We are also concerned that exposure of tarp cutters, tarp removers and hole burners to 1,3 dichloropropene has not been evaluated and we recommend a requirement of use of full-face respirators for this work.

[2] Randy Segawa, personal communication

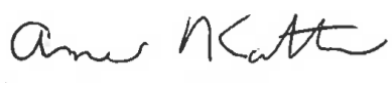
Broadcast application rate vs. treated area application rate
The ISR states that DPR is proposing to replace "application rate" with "broadcast equivalent application rate" in multiple sections of the regulations because the latter is used to calculate VOC emissions from strip and bedded applications.

However, the proposed changes in regulation could be interpreted to make the broadcast equivalent rate the maximum application rate. This is not acceptable because maximum application rates and at least some fumigation buffer zone requirements are based on the treated area application rate. The proposed change in section 6448.1a would allow a 1,3 D broadcast equivalent rate of 332 lb/acre for any method which would increase the maximum allowable application rates in the treated portions of the field for bedded applications of 1,3 dichloropropene.

In addition, it doesn't follow that for the strip fumigation applications in proposed changes to section 6448.1d the maximum broadcast equivalent rate would be 210 lb/acre when the maximum broadcast equivalent application rate is set at 332 lb/acre earlier in section 6448.1a.

Conclusion
The emission factors that DPR is proposing for TIF tarp field fumigation methods will underestimate emissions because they are not credible under real world pesticide use conditions. Reducing use of fumigants and other high VOC pesticides is the only reliable way to reduce emissions and DPR and other state agencies need to work together to help farmers transition to safer, less polluting methods of controlling soil borne pests. We hope you will carefully consider these comments. Please contact Anne Katten of CRLA Foundation if you have any questions.

Sincerely,



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