

MITC Mitigation

Response to Comments on the 2010 Draft MITC Mitigation Proposal

November 3, 2010

Kern County

General comments

What about daycare facilities in private homes?

Response: The permit conditions do not include daycare businesses in private homes. To clarify this, we have modified the suggested permit conditions language from daycare facilities to daycare centers, and included the following definition:

School: An institution for the instruction of children from kindergarten through high school. Also included are daycare centers and preschools (as defined in the Health and Safety Code 1596.76. "Day care center" means any child day care facility other than a family day care home, and includes infant centers, preschools, extended day care facilities, and schoolage child care centers.) This excludes family home day care. [Users can find day care centers in their area by going to the following website: https://secure.dss.cahwnet.gov/cld/securenet/cld_search/cld_search.aspx. Search on "child care center" as the facility type and then search on zip code, city, county or area code to find the names and addresses of the child care centers in a specific area.]

Other labeled metam application methods will no longer be allowed outside of the Non-Attainment Area or outside of the regulated period (May - Oct.)?

Response: DPR believes that we have included all the major application methods. If there are other methods that have not been included in these suggested permit conditions, DPR will evaluate them on a case by case basis.

All employees involved in an application or post-application water treatment must receive annual training in accident response procedures. Is this Metam Certification? Are accident response procedures site specific?

Response: The training provided by the registrants would fulfill this requirement. However, other appropriate training would also fulfill the training requirement.

Our maps do not show individual occupied structures.

- 1) Would we require a separate map from the grower showing these sites and distances?
- 2) Would we require them when the product is added to the permit or with the NOI?
- 3) Is DPR envisioning a workplan type system like we do for MB.

Response: A map of all occupied structures within ½ mile or less from the field to be treated would be submitted with the permit. Although earlier mitigation proposals did require a workplan to be submitted, this was dropped because of workload concerns of the CAC.

Kern CAC only requires a 24 hour NOI.

Response: The NOI is to be submitted at least 48 hours prior to the scheduled application. The CACs can require a shorter time interval if they have found that they can evaluate the intended application in less time.

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The suggested permit conditions require additional information that is not required now. Will this be a separate attached form?

Response: DPR leaves this up to the CAC.

If they miss the 4-hour window do they submit another 48 hour NOI? Can we give a waiver for resubmits?

Response: Once the 4-hour window closes a new NOI is required, but another 48-hour waiting period would not be needed unless required by the commissioner. We will clarify this in the final suggested permit conditions.

How would the operator of the property to be treated document how the operator of the adjoining property will not allow his workers to enter the buffer zone?

Response: The buffer zone agreement can be as simple as an e-mail message, or a piece of paper on which the operator of the property records what the adjacent property owner will do to keep his employees out of the buffer zone. A standard document is not required.

For the requirement that proof of sufficient water availability needs to be submitted with the NOI, what is considered proof?

Response: Adequate proof includes any document or statement of fact that shows the grower has enough water (or soil) to cover post-water requirements and possible need for water to control excess release from the field (MITC Control Plan).

From Regulations. CCR 6450.2 (paraphrased)

These regulations [application timing] apply only in nonattainment areas and only between May & Oct. These conditions will require this application timing all year at any location?

Response: Yes, the nighttime restrictions will be in effect year-round for metam sodium/potassium and dazomet to reduce the potential for off-site exposure. About 20% of the MITC illness incidents occurred from November through April. The mitigation restrictions were developed to prevent illness incidents throughout the year. There are limited exceptions to the ban on nighttime applications.

As written, the suggested permit conditions state that the buffer zone is measured from the perimeter of the application block to the closest point of the occupied structure's property line. When determining if the buffer zone includes an occupied structure, measure from the application block perimeter to the closest point of the structure's property line. We've gone back and forth on this ourselves. Small lots we tend to measure to the fence line. Large lots to the structure.

Response: DPR agrees that this is a difficult issue. The suggested permit conditions now allow the resident of the occupied structure to draw the line if the operator of the property wishes to get an agreement with them.

Are vehicle or foot traffic allowed to transit through buffer zones?

Response: The suggested permit conditions allow the CAC to approve buffer zones that extend across transit sites (streets, highways, etc.). The suggested permit conditions allow both vehicle and foot traffic to transit through buffer zones.

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What are commissioner-approved activities that are allowed in the buffer zone?

Response: These activities would be anything that the CAC determines as necessary, such as removing ripped tarps that have the potential to blow onto roads.

Buffer zones can extend into properties of occupied structures or bystander areas if advance permission is obtained from the property owner/operator/legal resident to allow the buffer zone to intrude on the property up to a clearly specified boundary. Why doesn't this permission need to be documented and submitted with the NOI? If the adjoining property operator fails to keep his people out of the buffer, who is responsible, and is this enforceable?

Response: We agree that this advanced permission should be documented and submitted with the NOI. We will add this to the final suggested permit conditions.

Are these tables the same as will be required on the new US EPA labels?

US EPA labels were going to have buffer zone reduction credits based on soil type and sealing methods. Are there going to be buffer zone reduction in these permit conditions?

Response: No, DPR's buffer zones are different than U.S. EPA's. The differences are due to the how the buffer zones were modeled. Once the distances were derived, DPR increased the modeled distances by 25% to protect bystanders from any peak emissions that might occur. DPR has not made a final decision if buffer zone credits will be allowed in California. U.S. EPA will not have buffer zones in place until late 2011 at the earliest. DPR wants to ensure that there are buffer zones in place as soon as possible, so DPR is going forward with these permit conditions.

Kern CAC requires that all employees involved with the application be trained, and that at least 1 Metam certified person be physically on site during the application and sealing process.

Response: The suggested permit conditions also require the above. See response to the next question about other requirements for onsite presence.

For the 1 or 2 hour monitoring requirement, does this require mean someone must be present continually on site documenting conditions every 1 or 2 hours OR coming by every 1 or 2 hours to continually check on the site.

Response: We have changed this requirement to read as follows:

On the day of application, the operator of the property or a trained employee must be at the site continually from 1 hour before sunset through 1 hour after sunset, in addition to the periods required to conduct post-application monitoring. For the three allowed nighttime applications, the operator of the property or a trained employee must also be on site continually during the hour before sunrise and hour after sunrise, in addition to the periods required to conduct post-application monitoring. If an employee is present at the site, the employee must be able to immediately contact the operator of the property or have authority to respond in case any unusual conditions occur.

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The regulations do not require water seals. Kern CAC require the water seal to begin immediately at the completion in each irrigation set when required (during May-Oct. or when near sensitive areas). We require only 1 seal on the day of application and another on day 2 in May - Oct.

Response: These permit conditions are not about VOCs, but are intended to protect workers and residents off-site. We attempted to make them work in conjunction with the VOC regulations; but the permit conditions do differ. The year round and statewide post-application water treatment requirement was developed after a review of illness incidents that occurred between 1993 to 2008 and flux data submitted to DPR.

Regarding the following: "The CAC has the option to eliminate the third post-application water treatment requirement in sensitive areas based on an evaluation of the soil type and moisture content, and knowledge of local conditions and effective control measures previously used." Would the CAC just include or exclude this water treatment? We don't have time to make a case by case determination of each site. Who evaluates soil type, moisture, etc.?

Response: The decision to exclude the third post-application water treatment is up to the CAC. The CAC is responsible for evaluating the soil type and moisture content. If time does not allow a thorough evaluation of each site, the grower will have to require the 3rd post-application water treatment; the CAC does not have to eliminate it.

Is the MITC Control Plan part of new US EPA requirements? US EPA wanted a site specific plan that included buffer zones.

Response: The MITC Control Plan is part of the information required by U.S. EPA. In the permit conditions, we allow the California Fumigant Management Plan to substitute for the MITC Control Plan.

Dazomet

Regarding multiple block restrictions, does 24 or 48 hours need to elapse between the start of each application?

Response: If an operator of the property is treating several fields that are less than ¼ mile apart, and the application to the second field begins within 24 hours of the start time of the first application, this is considered to be a multiple block. The buffer zone would be determined by adding the total acreage treated. For Metam sodium and metam potassium applications where only one post-application water treatment is made, if the application to the second field begins within 48 hours of the start time of the first application, this is considered to be a multiple block.

For the requirement that the operator of the property or a trained employee must be present during the application, does this mean a MITC-certified employee?

Response: The training provided by the registrants would fulfill this requirement. However, other appropriate training would also fulfill the training requirement.

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The post-application water treatments require that the water is applied at a rate of 0.15 – 0.25 inches of water per hour. The second post water application does not have this rate requirement, and neither do the VOC regulations.

Response: There should be a rate requirement in the second post-application water requirement. DPR will make the correction in the final suggested permit conditions.

The fifth post-application water treatment is not required in the VOC regulations.

Response: True. This requirement is based on the label recommendation of keeping the soil uniformly moist for 5 to 7 days after incorporation into the soil to retain the concentration of gases within the soil. Keep in mind that these permit conditions are separate and for a different purpose than the VOC regulations.

The footnote at the bottom of the Dazomet is for a Metam table.

Response: This is an error and will be corrected in the final suggested permit conditions.

Drip, Spray Blade, Power Mulcher with Soil Cap, and Rototiller Applications

The suggested permit conditions prohibit these applications to be made within ¼ mile of a school when the application is to 5 acres or less. Do we want to reduce this buffer to schools for smaller sites?

Response: The buffers already take this into account.

Are these the same as the new US EPA labels? We currently buffer occupied structures and residential areas differently. (100' / 500' May-Oct. and 20' / 100' Nov.-April). Table is 100' for all applications.

Response: U.S. EPA buffer zones will be different than the ones in the suggested permit conditions. Because your current buffer zones are more stringent than what DPR is suggesting, you are encouraged to use your buffer zones if they have kept illnesses from occurring. DPR's buffer zones are based on illnesses, flux data and modeling.

The REI is still 48 hours. Our current buffer zone restrictions (while not clearly stated) last the entire 48 hour REI.

Response: Because your current buffer zone restrictions are more stringent than what DPR is suggesting, you are encouraged to use your restriction if they have kept illnesses from occurring.

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The 24 hour buffer zones are in effect when: a. b. & c. Or a. b. or c.

Regs (6450.1d8) only require soil compaction. No water seal (treatments).

Regs (6450.1d7) only requires lines be flushed with 3 times the water in the main & lateral lines.

Our permit conditions require water seal between May & Oct. or the rest of the year when the site is within 1/2 mile of a sensitive area.

Response: The 24-hour buffer zone is in effect whenever any one of the conditions is met. We will clarify this in the final suggested permit conditions. The CAC has the option to keep whatever permit conditions have been successful in preventing illnesses. You are correct that 3 CCR 6450.1(d)(8) requires only soil compaction and no water treatment, and that 3 CCR 6450.1(d)(7) only requires that lines be flushed with 3 times the water in the main and lateral lines. These are the same requirements that DPR has included in the suggested permit conditions.

In regard to the applications requiring a 48-hour buffer zone, one post application water treatment will now be required for all these applications any time of year?

Response: If an application is followed by only one post-application water treatment, then the buffer zone will remain in effect for 48 hours any time of the year.

The suggested permit conditions will reduce our buffer to residential areas, labor camps, & businesses from 500' to 100'.

Response: If the CAC would prefer to retain the 500' buffer zone for these application methods, DPR encourages them to do so.

Several of the method-specific requirements are new and not found in the Regs or Kern's current PCs. Kern CAC currently have other field equipment minimum specifications.

Response: DPR reviewed metam permit conditions from all the counties, as well as information learned from past illness incidents when developing these suggested permit conditions. The requirement that the fumigant must be under at least 6 inches of soil for spray blade and power mulcher applications was developed after talking to growers and applicators using these methods.

If all buffer zones are 100', why is there a table?

Response: The tables have been removed from the final suggested permit conditions.

90' buffers for Metam Potassium?

Response: Yes.

Drench and Flood Applications

Are water seals only required near sensitive areas?

Response: Post-application water treatments are not required for flood applications in either sensitive or standard areas. However, post-application water treatments are required for drench applications. For sensitive areas, three post-application water seals are required. For standard areas, two post-application water seals are required.

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<p>The time restriction for drench and flood applications is not in regs or Kern's current PCs.</p> <p><i>Response: Yes, this is new requirement. Unless specifically exempted, all application methods must follow the application time restrictions.</i></p>
<p>Is there a 50 ac/day maximum for drench applications?</p> <p><i>Response: Yes.</i></p>
<p>Is there an 80 ac/day maximum for flood applications?</p> <p><i>Response: Yes.</i></p>
<p>Where does it say any water seals are required for flood applications? 24 hour REI with no water seal & 48 hour REI w/ 1 water seal? This makes no sense. This is not in the regs or Kern's current permit conditions.</p> <p><i>Response: You are correct, there are no post-application water treatments required for flood applications. The sentence stating that buffer zones are in effect for 48 hours following one post-application water treatment should not be there. DPR will remove this sentence and clarify that flood applications do not require post-application water treatments in the final suggested permit conditions.</i></p>
<p>The buffer zone table heading includes sprinkler application. Have we discussed sprinkler applications yet?</p> <p><i>Response: This is an error and will be corrected in the final suggested permit conditions.</i></p>
<p>Shank and Rod Bar Applications</p>
<p>Some buffers for shank applications will increase significantly.</p> <p><i>Response: DPR agrees with this comment.</i></p>
<p>Kern's PCs limit applications to 2 irrigation sets per day.</p> <p><i>Response: Kern is encouraged to continue that practice if it has worked to eliminate illnesses.</i></p>
<p>We currently have no limit on maximum application block size.</p> <p><i>Response: This is a new restriction based on a review of illness incidents and flux data from field monitoring studies.</i></p>
<p>Kern's current PCs require a 500' buffer to sensitive areas & 100' buffer to occupied structures. (W/ exception for 100' / 20' buffers for applications of less than 64 lbs/AI in winter months).</p> <p><i>Response: DPR's suggested permit conditions are based on a review of statewide illnesses, environmental flux data from field studies (some conducted in Kern Co.), and mitigation measures that appear to be effective in some counties. If a CAC has specific conditions that have been effective in preventing offsite movement of MITC, the CAC are encouraged to use those conditions in their permit.</i></p>

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Kern still requires water seals for soil capping applications May - Oct. or during the rest of the year if within 1/2 mile of a sensitive area.

Response: DPR encourages any CAC to incorporate requirements that have worked for them in the past into their permit conditions.

Sprinkler Applications

What Tables? The ones after the drench method? 50 ac/day max? These will dramatically reduce our 1/2 mile buffer to sensitive areas & increase our 500' buffers to occupied structures? Is this for US EPA labels?

Response: You are correct that the maximum acreage is 50 acres/day, and that two of the three appropriate tables are located after the drench application section; we will insert the correct tables in the final suggested permit conditions. When DPR developed the buffer zone tables, we took into account the circumstances of past exposure incidents, in addition to air monitoring data during and following legal applications, field observations and our risk assessment conclusions. DPR encourages any CAC to incorporate more restrictive requirements that have worked for them in the past into their permit conditions.

Buffer zones are referenced in appendix IV. Where is appendix IV Tables 1-3?

Response: This is an error. The appropriate buffer zone table will be included in the final suggested permit conditions.

Sprinkler applications beginning no earlier than 1 a.m. are not allowed between May 1 and October 31 in ozone nonattainment areas. Kern may allow these applications Nov. - April.

Response: These applications are allowed between November 1 and April 30 throughout the State. Also, these applications are allowed statewide outside of the ozone nonattainment areas covered in the VOC regulations. However, the applications must be made under the very specific conditions outlined in the permit conditions.

Definitions

Would bystander areas include roadsides frequently transited by foot. (areas between schools or bus stops and homes.) Who do we determine these sites?

Response: Roadsides frequently used for foot traffic would be considered as transit sites. The CAC has the discretion to approve a buffer zone that extends across a transit site.

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The multiple block definition is confusing. If applications start times are 24 hours apart we do not consider the total acreage when determining buffer sizes?

Response: If an operator of the property is treating several fields that are less than ¼ mile apart, and the application to the second field begins within 24 hours of the start time of the first application, this is considered to be a multiple block. The buffer zone would be determined by adding the total acreage treated. For Metam sodium and metam potassium applications where only one post-application water treatment is made, if the application to the second field begins within 48 hours of the start time of the first application, this is considered to be a multiple block.

Kern currently excludes areas where people may be for limited amount of time (Barns, sheds, etc.) as occupied structures.

Response: DPR encourages any CAC to incorporate requirements that have worked for them in the past into their permit conditions..

The reference to 3CCR 6000 as containing the definition of schools. This is not in my copy of the Code.

Response: You are correct, the Code and section cited were incorrect. The definition of school is an institution for the instruction of children from kindergarten through high school. Also included are daycare centers and preschools (as defined in the Health and Safety Code 1596.76). DPR will make the correction in the final suggested permit conditions.

San Mateo County

A buffer zone table for the soil capping application method is needed. Soil capping is the primary method of application in San Mateo county and such a table will be necessary to issue permits and comply with the proposed permit conditions.

Response: We will include a table for soil capping application methods in the final suggested permit conditions.

Clarify whether buffers apply to day care facilities in family homes.

Response: We will make it clear in the final suggested permit conditions that the application restrictions do not apply to day care facilities in family homes. See response below for definition of day care center.

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Consider improving the definition of “schools, daycare and preschools. The reference is to 3 CCR 6000, which does not contain the definition. Also, the term “licensed day care facility” was used in the conference call. Is there a distinction between licensed facilities and those that are not?

Response: To clarify the definition of “schools, daycare and preschools”, we have modified the suggested permit conditions language and included the following definition:

School: An institution for the instruction of children from kindergarten through high school. Also included are daycare facilities centers and preschools (as defined in the Health and Safety Code 1596.76. "Day care center" means any child day care facility other than a family day care home, and includes infant centers, preschools, extended day care facilities, and schoolage child care centers.) This excludes family home day care. [Users can find day care centers in their area by going to the following website: https://secure.dss.cahwnet.gov/cclid/securenet/cclid_search/cclid_search.aspx. Search on “child care center” as the facility type and then search on zip code, city, county or area code to find the names and addresses of the child care centers in a specific area.].

Security of treatment site – clarify whether a person (operator or trained employee) is required to be on the site continuously for 12 hours following the application regardless of the circumstances. Would such continuous presence be required if the application was in a remote area, i.e. bordered on all sides by private property under control of the operator where there are no structures or public roads? Might such an exemption be added to the introduction on page one where there are “settings and applications not covered by these conditions”?

Response: We have changed the requirement to read as follows:

On the day of application, the operator of the property or a trained employee must be at the site continually from 1 hour before sunset through 1 hour after sunset, in addition to the periods required to conduct post-application monitoring. For the three allowed nighttime applications, the operator of the property or a trained employee must also be on site continually during the hour before sunrise and hour after sunrise, in addition to the periods required to conduct post-application monitoring. If an employee is present at the site, the employee must be able to immediately contact the operator of the property or have authority to respond in case any unusual conditions occur.

However, the presence of a person onsite is not about security of the treatment site. It is to detect changes in conditions that might lead to offsite movement of MITC toward bystanders (residents, field workers, etc.)

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Clarification of “Application Methods Requirements” – clarify whether water treatments are required when the soil capping method is used for sealing the fumigation. On page five, the fourth bullet under “Shank applications beginning no earlier than 1 a.m.” specifies “a minimum of two post-application water treatments must be applied”. There is an exception that allows the soil capping method of sealing on page six, however, this exemption applies to the “Post Application Requirements” while the requirement for “two post-application water treatments” is stated in the “Application Method Requirements”. For purposes of clarification, DPR might consider editing the fourth bullet under “Application Method Requirements” to read “ a minimum of two post-application water treatments must be applied as directed in the Post-Application Requirements below”.

Response: We agree that these sections are confusing as written. DPR will develop separate suggested permit conditions for each application method. However, spray blade with soil capping is not an allowed nighttime application method. The shank application allowed at 1 a.m. has very specific shank configurations that must be followed for that application to be allowed.

The ‘one-size-fits-all’ permit does not recognize the variety of climates and weather conditions of the various regions of the state, and is unlikely to address all application circumstances. To address this, it should be clear that these are minimum conditions that pre-site inspections are critical, and that CAC may additionally condition permits to ensure safe and effective use. Conversely, the one-size –fits-all permit imposes conditions that under many circumstances are not necessary. The imposition of arbitrary permit requirements that do not reflect local site conditions undermines the integrity our regulatory efforts as well as the industries respect for our enforcement activities. San Mateo CAC would suggest consideration of developing unique permit conditions for California Coast, Inland, Central Valley and Eastern Sierra regions, where each permit reflects regional differences and California’s variety of climates and weather conditions.

Response: The CAC has the ability to condition the permit with methods that have worked for them. We are attempting to develop regional interim permit conditions for chloropicrin. We will examine how that process works and if we have the resources necessary to do that on a regular basis. We recognize these permit conditions are based on the fairly limited data that DPR has available. It does not cover all environmental conditions, climates, soil types, etc.

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Imperial County

We are at a loss understanding why permit conditions for drip system applications would be more stringent than those for sprinklers. Drip system applications are the most efficacious and safe method available:

1. Less metam is used. Applications are calibrated in parts per million rather than gallons per acre. A range of 200 – 300 parts per million generally results in 25-30 gallons per acre rather than 40 which most flood applications require.
2. Less risk of odor. Treated water is placed in the soil not on the surface.
3. Less risk of treated water moving off site.

Irrigation water in Imperial Valley is available in 12, 24, and 48 hour increments. Water may be delivered as early as 6 a.m. or as late as 11 a.m. Water cannot be ordered for 1 hour after sunrise. Smaller block sizes would not help, as drip systems are designed to deliver a certain amount of water per hour per acre and will not wet a small area quicker than a large one. Stopping and starting again the next day, even if possible, would lose the advantage of using less metam because it would require retreating the area treated the day before to get to the untreated area. This could increase the risk of gassing off and possible exceeding labeled rates. Requiring drip systems applications of metam to start no earlier than 1 hour after sunrise and stop no later than 1 hour before sunset will render what is in our view the safest and most efficacious method of application all but unusable in Imperial Valley.

Response: DPR evaluated flux data from day time drip applications, and determined that these applications have low emissions. We do not know have data from from nighttime applications, thus we do not know if it would also be low. We do not feel it is appropriate to allow these applications to extend into nighttime without data to support it. However, the CAC may incorporate requirements that have worked for them in the past into their permit conditions.

San Luis Obispo

Would the NOI need to be resubmitted if the application does not occur during the 4 hour window?

Response: Yes, once the 4-hour window closes a new NOI is required, but another 48-hour waiting period would not be needed unless required by the commissioner. We will clarify this in the final suggested permit conditions.

How would the CAC verify irrigation capacity?

Response: The grower needs to provide documentation of available water (or soil). Adequate proof includes any document or statement of fact that shows the grower has enough water (or soil) to cover post-water requirements and possible need for water to control excess release from the field (MITC Control Plan). The commissioner could verify or not depending on their resources.

For the requirement that proof of sufficient water availability needs to be submitted with the NOI, what is considered proof?

Response: See response to above question.

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How does the CAC determine between 0.2 – 0.4 inches for post-application water treatments?

Response: This range was included on the recommendation of the Metam Alliance, to allow for the appropriate amount of water based on soil type. Sandy soil would need more water and clay less water.

In the Permit Conditions for Drip/Spray Blade etc. the following sentence is not clear: “Every two hours when the application is made in a standard area monitoring is required.”

Response: You are correct. The sentence should read “Every two hours when the application is made in a standard area.” We will make the correction in the final suggested permit conditions.

Are the buffer zones for the Drip/Spray Blade etc. applications all 100 feet?

Response: Yes, that is correct, for metam sodium. For metam potassium it is 90 feet. That correction has been added to the permit conditions. The difference is due to the amount of MITC created by the two chemicals.

Please clarify what needs to be filled out in the MITC Control Plan.

Response: DPR will clarify this in the training sessions, and will include a sample control plan in the final suggested permit conditions..

San Diego

Under the section for Drip, Spray Blade, etc., you have the 100 foot buffer zone for all acreage treated no matter what the pounds of metam sodium is applied. The conditions also do not cover golf courses, tree applications for prevention of root graft disease transmission, wood decay uses, potion soil, replant of individual vine or tree sites less than one contiguous acre, raised-tarp nursery fumigations of less than one acre and greenhouse. Since these situational sites are exempted for applications less than 1 acre, why wouldn't it include drip applications (under plastic or with overhead sprinklers for water sealing) less than 1 acre?

We currently have one two growers using metam sodium and/or metam potassium. The first, a tomato grower, fumes one time per year, usually in March, and fumigate several times during that month, in less than one acre pieces. The second, a flower grower, fumigates a couple of times per month in less than one acre pieces, for a total of approximately 20 fumigations annually. The use of metam is usually under plastic with sprinklers in place should there be an odor issue. The sprinklers are in place even when applications are made without the plastic. We have not responded to odor or illness issues pertaining to the use of metam sodium or potassium. Methyl bromide applications in these situations have a 60 foot buffer zone.

Response: DPR does not want to recommend buffer zones less than 100 feet for any method or application size. However, the CAC may incorporate requirements that have worked for them in the past into their permit conditions.

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Merced

A significant amount of our fumigations are on sweet potatoes. The majority of that work is done with 1,3 D. In the past two years, due to the shortage of 1,3 D, a couple of applicators began applying metam products with shanks. The applications worked well, and were done without water treatments. In the new conditions, it appears that shank applications will be required to use either water treatments or soil capping. In Merced, sweet potatoes are almost exclusively irrigated by drip irrigation. They are planted mostly in April and May and use water provided by the irrigation districts.

Problems

In regards to new conditions, here are some of the problems and concerns that our growers will be facing in Merced:

1. Fumigation is very essential to profitable sweet potato production.
2. At the latest, sweet potatoes are planted until the first part of July, with the majority planted in April and May.
3. Potato slips (new plants) need at a very minimum, two weeks time until planting in a treated field.
4. Our sweet potato growing areas are in the 1,3 D impacted townships, which limits the amount that can be used.

Sweet potato growers usually fumigate in November, February and March. Our irrigation districts usually do not provide water (when it's available) until the middle of March and shut-off in October. Growers needing to fumigate will have to find sources of water and sprinklers.

If water is going to be required for shank applications, growers will most likely opt for sprinkler applications because of the added cost and hassle of the shank application to sprinkler set up.

Drip application method has a unique set of problems associated with it. Ideally, to be cost effective, one drip line is used for application and irrigation and is moved throughout the irrigation season. During an application, it has to be moved three to five times by applicators for effective coverage of the growing area. These drip lines are flushed and moved, but may still result in more exposures because of problems. Also, drip applications will encourage use by private applicators, and will cut out the more experienced qualified applicators and PCO's. Of the 25% of growers that will not have to arrange for water because they have wells, less than half will be able to apply by drip because of equipment and expertise.

Flood applications and sprinkler applications for metam products will be the easiest and simplest methods for our growers to use, thus increasing the number of applications by these methods. We are obviously concerned with the thought of more sprinkler and flood applications of these products.

Growers have informed me that other older materials such as Temik or Mocap may get tried again by growers who can not comply with the new conditions.

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Have any other exemptions or alternatives been explored for water treatments or soil capping requirements for the shank applications? What about a no water treatment buffer. That may exempt some of our growers who are in remote areas.

Looking at the conditions, it appears that a sprinkler application of 20 acres @ 240 # /acre would = 100 ft. buffer while a shank application w/ 3 water treatments of a 20 acre site @ 240#/acre would = 200'. I would think that by injecting into the soil, you would get less emissions and less problems. From the conditions, I take it that data you have gathered supports the assumption that shank methods appear to be the most problematic.

I know the UC and other applicators have been doing some research with dual/simultaneous applications of 1,3 D and metam products. Has this been taken into consideration?

Response: We have modified the shank suggested permit conditions to allow two exemptions to the post-application water treatment requirements. One is to apply under the following conditions:

- 1. metam is banded using a width 14 inches or less.*
- 2. the maximum application rate is 60 pounds active ingredient per acre.*
- 3. the injection depth is 3-6 inches.*
- 4. a soil capping method is utilized by placing a minimum of 6 inches of soil on top of the bed over the band treatment and compacting using a mechanical device.*

A second option would be to tarp the field. Or you could perhaps have your growers look at spray blade, rotary tiller, or power mulcher applications to see if those would be a viable option. We are following the work done by UC and fumigant registrants on new application technologies and new tarp materials, and will incorporate proven technology into future revisions to fumigant suggested permit conditions.

You are correct that the data used to develop buffer zones showed shank applications to have higher field emissions than sprinkler applications

WHS staff are happy to work with you and any other CAC staff who have specific problems.

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Responsible Farmers Coalition

The requirement to document the agreement allowing the buffer zone to extend onto the adjoining party is of particular concern to our group as it is often extremely difficult to identify adjacent property owners. To identify the proper legal entity that owns an adjacent property can be extremely time consuming and sometimes virtually impossible. If the applicator or grower identifies the property owner of record through the appropriate county office, provides written notice to the property owner, and fails to receive a timely reply, this should be sufficient. An additional problem occurs if the adjacent landowner fails to provide approval. DPR does not provide any legal recourse to resolve disputes of this nature. Governmental procedures must be established to expeditiously resolve these disputes. We recommend that the county agriculture commissioner be given the discretion to approve the permit if it can be shown that reasonable efforts were made to contact the property owner and that all other required procedures were met.

Response: If the owner of the adjacent property cannot be contacted, there is no way that he/she can assure that workers will not enter the buffer zone if it extends across property lines.. Unless there is an agreement between property owners, the buffer zone cannot extend into adjacent agricultural properties. DPR does not intend to implement a procedure to resolve disputes.

The formulas DPR used in establishing the size of the buffer zones fails to utilize studies, such as Husein Ajwa, Ph.D., and Sullivan Environmental Consulting, *A Trial to Evaluate Concentrations and Emission Rates from the Application of Metam Sodium by Shank Injection/Compaction on a Daytime and Nighttime Basis* (May 2009) and CAS Number 6734-80-1, U.S. EPA PC Code 039003, CA DPR Chemical Code 00616, which show that application of metam sodium results in negligible fumigant emission and requires significantly smaller buffer zones.

Response: In the cited study, the emissions measured for this fumigation method are significantly lower than emissions for similar fumigation methods. DPR plans to conduct a study to verify the low emissions before it revises the regulatory requirements for the fumigation method.

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Metam Alliance

We suggest that DPR prohibit fumigations only near Licensed daycare facilities and licensed preschools.

Response: We understand the problem of locating all preschools and daycare facilities using the definition in the current suggested permit conditions. All legal day care operations in the state must be licensed. We think that the following change in our definitions will address the problem. We have modified the suggested permit conditions language from daycare facilities to daycare centers, and included the following definition:

School: An institution for the instruction of children from kindergarten through high school. Also included are daycare centers and preschools (as defined in the Health and Safety Code 1596.76. "Day care center" means any child day care facility other than a family day care home, and includes infant centers, preschools, extended day care facilities, and schoolage child care centers.) This excludes family home day care. [Users can find day care centers in their area by going to the following website: https://secure.dss.cahwnet.gov/cldd/securenet/cldd_search/cldd_search.aspx. Search on "child care center" as the facility type and then search on zip code, city, county or area code to find the names and addresses of the child care centers in a specific area.]

Instead of requiring documentation of the agreement allowing a buffer zone to extend onto the adjacent agricultural property, we suggest that the operator of the treated property notify the operator of the neighboring property of the buffer zone extension. The operator of the property to be treated must document that the operator of the adjoining property acknowledges the buffer zone and the requirement that workers shall not enter the buffer zone. A statement by the operator of the treated property, or other documentation that operators of adjoining agricultural property acknowledge that the buffer zone extends into their property must be submitted with the NOI.

Response: The purpose of this requirement is to ensure that the operator of the adjoining agricultural property is aware of an upcoming application, aware that the buffer zone will extend onto his/her property, and has agreed that none of his/her workers will be allowed to enter the buffer zone. DPR does not believe that the suggested wording conveys the same intent.

We suggest that wording be added to the Buffer Zone Determination and Restrictions section that Commissioners be given the discretion to allow buffer zones to include unoccupied areas of the property based on a site-specific evaluation.

Response: DPR has received comments from some CAC staff that they do not have time to conduct site-specific evaluations for every application. We feel that the wording in the current suggested permit conditions allows enough flexibility so that buffer zones can extend into properties of occupied structures with agreement from the legal resident.

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Instead of allowing buffer zones to extend into properties of occupied structures unless advanced permission is obtained from the property owner, operator or legal resident, we suggest that the property owner, etc. acknowledge that the buffer zone extends onto the property up to a clearly specified boundary.

Response: The original wording of this requirement allowed the buffer zone to extend only to the property line when an occupied structure was located on that property. At the request of several CAC staff, DPR included the wording to allow the buffer zone to extend to a clearly specified boundary. The purpose of this requirement is to ensure that the property owners, etc. have given their permission to allow the buffer zone to extend onto his/her property, and that the outer boundary of the buffer zone is clearly identifiable so that people can stay out. DPR does not believe that the suggested wording conveys the same intent.

Instead of requiring that the operator of the property or a trained employee be present at the site continually during the 12 hour post-application monitoring period, we suggest that the operator of the property or a trained employee must be physically present at the site at least once per hour during the 12 hour post-application period. Operators or trained employees should be allowed to move between treated fields that are close enough to allow them to be able to monitor each field once per hour.

*Response: We have changed the requirement to read as follows:
On the day of application, the operator of the property or a trained employee must be at the site continually from 1 hour before sunset through 1 hour after sunset, in addition to the periods required to conduct post-application monitoring. For the three allowed nighttime applications, the operator of the property or a trained employee must also be on site continually during the hour before sunrise and hour after sunrise, in addition to the periods required to conduct post-application monitoring. If an employee is present at the site, the employee must be able to immediately contact the operator of the property or have authority to respond in case any unusual conditions occur.*

In the section listing exemptions for post-application water treatment requirements, when the CAC makes the determination that the third post-application water treatment can be eliminated, the buffer zone required for 3 post-application water treatments should apply. Likewise, when the CAC makes the determination that the second post-application water treatment can be eliminated, the buffer zone required for 2 post-application water treatments should apply

Response: DPR realizes that there are application situations where additional post-application water treatments are unnecessary. However, without data to assess the conditions and control methods used, we cannot determine if a shorter buffer zone is warranted. Therefore, the buffer zones will still need to be based on the actual number of post-application water treatments used.

For the requirements for spray blade with soil caps and power mulcher applications, add the requirement that the fumigant must be under at least 6 inches of untreated soil except when post-application water treatments are made.

Response: It is DPR's understanding that these applications are made without post-application water treatments.

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In the exceptions to post-application water treatments, we suggest the following wording:

Exceptions to Metam Sodium/Metal Potassium Post-Application Water Treatment Requirements continued:

1. Alternate Sealing:

Post-application water treatments are not required for applications made under the either of the two conditions listed below. For applications meeting one of these two conditions, the buffer zone will remain in effect for 24 hours (unless specified) after the completion of the application:

- A soil capping method is utilized (i.e., a minimum of 6 inches of untreated soil is placed over the band treatment and compacted using a mechanical device). **OR**
- The treated area is tarped. The tarp must remain in place for a minimum of 48 hours.

The buffer zone remains in effect until the tarp is removed.

Response: DPR agrees that the way this section is currently written is not clear and will be more clearly stated in the final suggested permit conditions.

Ratto Brothers

It would be very difficult to give a start time within a 4 hour notice, 48 hours in advance. We are doing many small blocks 6 days a week with multiple Metam applications per block. Our current Stanislaus County permit conditions require a 48 hour notice of intent. It is understood that we are applying Metam 6 days a week on possibly every field. We recommend that applications of 10 acres or less do not require start time within a four hour window. Let County Ag Commissioners Office (CAC) special permit conditions supersede states permit conditions.

Response: These are suggested permit conditions. The CAC can and should continue to use whatever works best for unique sites.

I have a real concern about the 100 foot buffer zone and having to contact and receive advanced permission from the property owners. **THIS WILL NOT WORK!!**

We farm 9 different parcels ranging from 20 acres to 250 acres. There are 52 individual fields within these parcels. Each one of these fields is broken up into blocks ranging in size from .25 ac to 1.0 ac. There are over fifty different property owners that are within 100 feet of our fields. The main problem is the fields that run perpendicular to the neighbor's property line. The fields that run parallel are not a big problem because you can just leave off a few complete rows at the side of a field to make up the 100 feet. On fields that run perpendicular to a neighbors property line you would have to leave untreated the ends of the whole field. Many of our fields are only separated from our neighbors by a fifteen foot road. We treat right up to the road where the furrows end. If we had to leave 85 feet of the field untreated at the headland, we would suffer disastrous results. Most of our fields are 600 to 750 feet in length. This would be over ten percent untreated.

We use Metam in a unique way because we are farming many, over 2000 small individual blocks, a year. Most of the blocks are applied with 2 applications of Metam. Either the power mulcher or spray blade or the drench method. These applications are necessary because we have a very limited number of herbicides available for the minor crops we grow. The average size Metam application block is most always less than 10 acres. We recommend eliminating buffer zones for applications of 150 lbs. of A.I.

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per acre. If DPR deems necessary to have buffer zones, place a 25 foot buffer zone in place for 150 lb. or less of A.I. per acre. Exempt buffer zone restrictions for applications 10 acres or less. If not possible to exempt, then bring them down to 25 feet. Let CAC permit conditions supersede states for applications 10 acres or less.

Response: DPR does not want to recommend buffer zones less than 100 feet for any method or application size. However, DPR encourages any CAC to incorporate requirements that have worked for them in the past into their permit conditions. We encourage you to work with Stanislaus county CAC staff to address your particular situation.

Rod Bar Application: definition should include after the words solid press rollers.... “or bed shaper units”. We have always called this method a spay blade application. We have the spray blade mounted before and below the bed shaper. I have never heard it called a Rod Bar Application. This might cause confusion out in the field.

Response: We will make the addition to the definition of rod bar applications.

After reading the document through a few times it is unclear to me as to what and how much and how far Metam can be applied next to a sensitive area. I would recommend following Stan Co permit conditions.

Response: DPR agrees that the current suggested permit conditions are unclear in several areas. We have reformatted and tried to clarify the text in the final suggested permit conditions.

Jim Wells

The agreement required in the notice of intent should be changed to say “A statement by the operator of the treated property, or other documentation that operators of adjoining agricultural property acknowledge that buffer zones extend into their property.”

Response: There needs to be some agreement that the adjoining property operator knows when to keep workers out of the buffer zone.

For measurement of buffer zones: Commissioners may allow buffer zones to include unoccupied areas of the property based on a site specific evaluation.

Response: DPR believes that the property resident has the right to decide if the buffer should extend into their property; the buffer is to prevent bystander exposure. In addition, we just received comment from a county that they do not have time to do site specific evaluations of every application. Thus the language to permit the buffer to extend to a specific point on the property will remain in the permit conditions.

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For post application monitoring, suggest the following language: The operator of the property or a trained employee must be physically present at the site at least once per hour during the 12-hour post-application monitoring period.

Response: DPR changed the language in this section:

On the day of application, the operator of the property or a trained employee must be at the site continually from 1 hour before sunset through 1 hour after sunset, in addition to the periods required to conduct post-application monitoring. If an employee is present at the site, the employee must be able to immediately contact the operator of the property or have authority to respond in case any unusual conditions occur.

For the allowed night time applications the language is:

On the day of application, the operator of the property or a trained employee must be at the site continually from 1 hour before sunset through 1 hour after sunset, in addition to the periods required to conduct post-application monitoring. For the one allowed nighttime shank application, the operator of the property or a trained employee must also be on site continually during the hour before sunrise through hour after sunrise, in addition to the periods required to conduct postapplication monitoring. If an employee is present at the site, the employee must be able to immediately contact the operator of the property or have authority to respond in case any unusual conditions occur.

2. CAC Discretion

- The CAC has the option to eliminate the third post-application water treatment requirement in sensitive areas based on an evaluation of the soil type and moisture content, and knowledge of local conditions and effective control measures previously used. The buffer zone required for 3 post application water treatments applies to these applications.
- The CAC has the option to eliminate the second post-application water treatment requirement in standard areas based on an evaluation of the soil type and moisture content, knowledge of local conditions and effective control measures previously used, and the application block is greater than 1 mile from a school in session. The buffer zone required for 2 post application water treatments applies to these applications.

Response: DPR has evaluated data, illness reports, conducted modeling for many scenarios. If based on local conditions, the CAC feels they can reduce the number of post-application water treatments, then the buffer zones need to change to ensure bystander protection.

Spray Blade Applications:” The fumigant must be under at least 6 inches of untreated soil, either as a result of incorporating the material to this depth, or by applying a cap of untreated soil, except when post application water treatments are made.

Response: We have been told several times that they don't use water when using a spray blade.

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Definition of School: An institution for the instruction of children from kindergarten through high school. Also included are daycare facilities and preschools (as defined in 3 CCR 6000). [Note: I could not find a definition of daycare facilities and preschools in 3 CCR 6000. In addition, research by Cynthia Cory of the California Farm Bureau Federation, has revealed that it is not possible to ascertain the location of certain facilities that seemingly would require a “school” buffer zone due to concerns about safety. Please refer to the Farm Bureau comments for details.]

Response: The definition of a school is found in the Health and Safety Code, the reference to 3 CCR was in error. The new definition is as follows:

School: An institution for the instruction of children from kindergarten through high school. Also included are day care centers and preschools, as defined in the Health and Safety Code section 1596.76. "Day care center" means any child day care facility other than a family day care home, and includes infant centers, preschools, extended day care facilities, and schoolage child care centers. This excludes family home day care. (Users can find day care centers in their area by going to the following website: https://secure.dss.cahwnet.gov/cld/securenet/cld_search/cld_search.aspx. Search on “child care center” as the facility type and then search on ZIP code, city, county or area code to find the names and addresses of the child care centers in a specific area.)

Farm Bureau

The definition of school in the proposed permit conditions for metam sodium reads as follows:

School: An institution for the instruction of children from kindergarten through high school. Also included are daycare facilities and preschools (as defined in 3 CCR 6000).

It is important to note that there is no reference to daycare facilities and preschools in 3 CCR 6000.

Response: See the response above.

2) Buffer Zone Restrictions

When an application requires the buffer zone to extend into an adjoining agricultural property we would request that **notification** of the operator of the property with documentation that the operator of the adjoining property **acknowledges** the buffer zone and the requirement that workers shall not enter the buffer zone is a preferable method to the proposed language. Documentation of this **notification** must be submitted with the permit or NOI.

Response: In order to protect bystander fieldworkers, the operator of the neighboring property needs to understand that the buffer will extend into their property AND agree that they will not have fieldworkers in the buffer while the buffer zone is in effect. Simple notification and even acknowledgement does not accomplish the same protection.