Appendix L

Metam Sodium, Metam Potassium, and Dazomet Field Soil Fumigation Recommended Permit Conditions

Overview

Background

Formerly Subsection C.7.2 – *Metam Sodium, Metam Potassium, and Dazomet Field Soil Fumigation Recommended Permit Conditions*.

Introduction

This document provides recommended permit conditions for field soil fumigation applications of metam sodium, metam potassium, and dazomet products.

DPR recommended permit conditions

The recommended permit conditions contained in this appendix supersede previous Department of Pesticide Regulation (DPR) recommended permit conditions for all field soil fumigation applications of MITC-producing products containing metam sodium, metam potassium, and dazomet.

The revised recommended permit conditions mitigate hazards associated with offsite movement of metam sodium, metam potassium, and dazomet and apply to all applications when used as a field soil fumigant. Many revisions are in response to recent improvements to fumigant product labeling. Those improvements enabled DPR to streamline the recommended permit conditions.

Application method organization

The recommended permit conditions have been organized by application method at the request of county agricultural commissioners.

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In this Appendix

This Appendix contains the following topics.

Application Method #	Application Method
1	**Dazomet** Field Soil Fumigation Recommended Permit Conditions
2	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Drench** Applications
3	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Drip** Applications
4	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Flood** Applications
5	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Power Mulcher** and **Rotary Tiller (Rototiller)** Applications
6	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Rod Bar** Applications
7	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Shank** Applications
8	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Spray Blade with Soil Cap** Applications
9	Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for **Sprinkler** Applications

Application Method 1

Dazomet Field Soil Fumigation
Recommended Permit Conditions

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Restrictions near Schools, Day care centers, and Preschools

All applications are prohibited ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.

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Recommended Permit Conditions, Continued

Application method requirements

The following requirements apply to all applications of dazomet:

1. All application equipment must be inspected immediately prior to use to assure it is in good working condition.
2. All irrigation equipment that will be used for post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment") must be inspected and tested prior to beginning the application to assure it is in good working condition.
3. Tarps are not permitted in lieu of post-application watering.
4. Application block size is limited to a maximum of 40 acres within a 24-hour period.

Offsite movement suppression requirements: emergency response measures

For all dazomet applications, the certified applicator supervising the application must verify that the operator of the property to be fumigated has the capability to respond to offsite movement of MITC. The specific capability required is shown in Tables 1 and 2. The supervising certified applicator must document that capability in the Emergency Response Plan located in the Fumigation Management Plan:

Table 1. Required Capability to Suppress Offsite Movement Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.

*See Appendix I for definition of "School"

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Offsite movement suppression requirements: emergency response measures (continued)

Table 2. Required Capability to Suppress Offsite Movement Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than ¼ mile up to 1 mile	Irrigation equipment and water available for 24 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than 1 mile	Not required

* See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

1. When planning to use water to suppress offsite movement, the certified applicator supervising the application must select, and document in the Emergency Response Plan located in the Fumigation Management Plan, a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The ranges of 0.20–0.40 inches of water and 0.15–0.25 inches per hour allow the CAC to determine the amount of water required based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.

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Recommended Permit Conditions, Continued

Offsite movement suppression requirements: emergency response measures (continued)

2. Follow the application site monitoring requirements under "Application Site Monitoring Requirements" detailed later in these permit conditions.
3. Whenever offsite movement of MITC is detected, cease the application (if still underway) and initiate the Emergency Response Plan indicated in the Fumigation Management Plan.
4. The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
5. Obtain authorization from the CAC prior to restarting any application that has been ceased due to a response.

Permit application

Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.
   - The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
   - The method of post-application treatment to be used to suppress offsite movement, including number of post-application water treatments, if applicable.
   - The buffer zone size and buffer zone duration if longer than required by the label.
   - The certified applicator's 24-hour contact telephone number.
   - Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.)

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Recommended Permit Conditions, Continued

Notice of intent (continued)

- Proof that sufficient water is available for application, post-application water treatment, and offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
- Proof of sufficient soil, if soil capping can be used in lieu of water for the offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
- Include the map required for Fumigation Management Plan in the NOI.

Application timing

Dazomet applications must start no earlier than 1 hour after sunrise. Applications must be completed in time to allow incorporation and post-application water treatment to begin no later than 1 hour before sunset.

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use buffer zone tables 1, 2, and 3 to determine the buffer zone distance based on application type.
   - For greenhouse applications, please refer to the buffer zone table on the product label to determine buffer zone distance.
   - For mechanically incorporated dazomet applications to golf course fairways that meet dimension requirements described on the product label (length of application area is twice the distance of the width), please refer to buffer zone Table 2. If the application area does not meet these size requirements, please refer to buffer zone Table 1 in these permit conditions.
   - If the buffer zone tables do not capture the specific acreage or application rate, round up to the nearest acre or rate.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If the written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

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Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
   - Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
     - Monitoring must be done at the outer edge of the buffer zone.
     - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
     - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
     - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).
2. Pre-Application
   - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.
3. During Application
   - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
     - Wind speed and wind direction; and
     - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms of exposure, equipment failure, or spill).

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Application site monitoring requirements (continued)

4. Post-application
   - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have the authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
   - Post-application field monitoring shall be conducted for 12 hours following application and recorded on form "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 3 and 4:

Table 3. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every hour

*See Appendix I for definition of "School"

Table 4. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

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Application site monitoring requirements (continued)

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Post-application watering information (see "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225"). Record start and stop times for water treatments, as well as total inches applied.
- Any unusual conditions observed at the application site (e.g., odor, reported symptoms of exposure, equipment failure, or spill).
- Monitoring must be done in all directions on calm days.

Post-application water treatments

1. Post-application water treatments are required and must be recorded on the "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225" or equivalent form and attached to the Post-Application Summary. Each post-application water treatment discussed below must be completed within 2–3 hours.
2. Additional post-application water treatments can be applied at any time in response to odor or illness provided the required water treatments listed below are completed in the specified time periods.
3. Water Treatment Schedule:
   - Post-application water 1 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, starting within 30 minutes of completion of the application. Additional water treatment can be made as necessary to ensure the soil profile is thoroughly wetted and all granules are activated.
   - Post-application water 2 (Day 1)—Apply a minimum of 0.75 inch of water to the application block, at a rate of 0.15–0.25 inches per hour, on the same day of application, beginning no earlier than 1 hour before sunset and completing by midnight.
   - Post-application water 3 (Day 2)—Apply a minimum of 0.4 inch of water to the application block, at a rate of 0.15–0.25 inches per hour, beginning no earlier than 1 hour before sunset and completing by midnight.
   - Post-application water 4 (Day 3)—Apply a minimum of 0.2 inch of water to the application block, at a rate of 0.15–0.25 inches per hour, beginning no earlier than 1 hour before sunset and completing by midnight.

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Post-application water treatments (continued)

- Post-application water 5 (Day 4)—Apply a minimum of 0.1 inch of water to the application block, at a rate of 0.15–0.25 inches per hour, beginning no earlier than 1 hour before sunset and completing by midnight.

The 0.20–0.40 inch range allows the CAC to determine the amount of water required, based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.

Buffer Zone Table 1. Dazomet Buffer Zone Values (feet) for Mechanically Incorporated Applications (except to Golf Courses, Fairways, and Greenhouses)

	Acres Treated													
lbs product/ac	**40**	**30**	**20**	**15**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**
421	2050	1750	1250	1050	800	800	800	800	800	500	500	500	500	150
396	1900	1500	1100	900	700	700	700	700	700	400	400	400	400	100
386	1900	1500	1100	900	700	700	700	700	700	400	400	400	400	100
376	1900	1500	1100	900	700	700	700	700	700	400	400	400	400	100
366	1900	1500	1100	900	700	700	700	700	700	400	400	400	400	100
356	1700	1350	1000	800	650	350	650	650	650	350	350	350	350	100
347	1700	1350	1000	800	650	350	650	650	650	350	350	350	350	100
337	1700	1350	1000	800	650	350	650	650	650	350	350	350	350	100
327	1500	1150	850	700	550	550	550	550	550	300	300	300	300	100
317	1500	1150	850	700	550	550	550	550	550	300	300	300	300	100
307	1500	1150	850	700	550	550	550	550	550	300	300	300	300	100
297	1300	1000	750	600	500	500	500	500	500	250	250	250	250	100
287	1300	1000	750	600	500	500	500	500	500	250	250	250	250	100
277	1300	1000	750	600	500	500	500	500	500	250	250	250	250	100
267	1300	1000	750	600	500	500	500	500	500	250	250	250	250	100
262	1000	800	600	500	400	400	400	400	400	200	200	200	200	100
257	1000	800	600	500	400	400	400	400	400	200	200	200	200	100
248	1000	800	600	500	400	400	400	400	400	200	200	200	200	100
238	1000	800	600	500	400	400	400	400	400	200	200	200	200	100
228	850	700	500	450	350	350	350	350	350	200	200	200	200	100
218	850	700	500	450	350	350	350	350	350	200	200	200	200	100
208	850	700	500	450	350	350	350	350	350	200	200	200	200	100
198	650	550	400	350	250	250	250	250	250	150	150	150	150	100
188	650	550	400	350	250	250	250	250	250	150	150	150	150	100
178	650	550	400	350	250	250	250	250	250	150	150	150	150	100
168	650	550	400	350	250	250	250	250	250	150	150	150	150	100
158	500	450	300	300	200	200	200	200	200	150	150	150	150	100
149	500	450	300	300	200	200	200	200	200	150	150	150	150	100
139	500	450	300	300	200	200	200	200	200	150	150	150	150	100
131	500	450	300	300	200	200	200	200	200	150	150	150	150	100
129	300	300	200	200	100	100	100	100	100	100	100	100	100	100
119	300	300	200	200	100	100	100	100	100	100	100	100	100	100
109	300	300	200	200	100	100	100	100	100	100	100	100	100	100
99	250	250	150	150	100	100	100	100	100	100	100	100	100	100
89	250	250	150	150	100	100	100	100	100	100	100	100	100	100
79	250	250	150	150	100	100	100	100	100	100	100	100	100	100
69	250	250	150	150	100	100	100	100	100	100	100	100	100	100
≤65	200	200	150	150	100	100	100	100	100	100	100	100	100	100

Buffer Zone Table 2. Dazomet Buffer Zone Values (feet) for Mechanically Incorporated Applications to certain Golf Course Fairways

For mechanically-incorporated applications to golf course fairways only, minimum buffer zone values in Table 2 apply provided that both of the following conditions are met:

1) The application area is 5 acres or less; and
2) The length of the application area is at least twice the width of the application area (e.g., the length is 80 feet and the width is no greater than 40 feet).

Buffer Zone (feet)					
Application Rate (lbs product/Acre)	**5 Acres**	**4 Acres**	**3 Acres**	**2 Acres**	**1 Acre or less**
525	700	700	700	700	200
396	400	400	400	400	100
386	400	400	400	400	100
376	400	400	400	400	100
366	400	400	400	400	100
356	350	350	350	350	100
347	350	350	350	350	100
337	350	350	350	350	100
327	300	300	300	300	100
317	300	300	300	300	100
307	300	300	300	300	100
297	250	250	250	250	100
287	250	250	250	250	100
277	250	250	250	250	100
267	250	250	250	250	100
262	200	200	200	200	100
257	200	200	200	200	100
248	200	200	200	200	100
≤238	200	200	200	200	100

Buffer Zone Table 3. Dazomet Buffer Zone Values (feet) for Water Incorporated Applications (except to Golf Courses, Fairways, and Greenhouses)

	Acres Treated													
lbs product/Ac	**40**	**30**	**20**	**15**	**10**	**9**	**8**	**7**	**6**	**5**	**4**	**3**	**2**	**1**
262	1000	800	600	500	400	400	400	400	400	240	240	240	240	100
257	1000	800	600	500	400	400	400	400	400	240	240	240	240	100
248	1000	800	600	500	400	400	400	400	400	240	240	240	240	100
238	1000	800	600	500	400	400	400	400	400	240	240	240	240	100
228	850	700	500	450	350	350	350	350	350	200	200	200	200	100
218	850	700	500	450	350	350	350	350	350	200	200	200	200	100
208	850	700	500	450	350	350	350	350	350	200	200	200	200	100
198	650	550	400	350	250	250	250	250	250	150	150	150	150	100
188	650	550	400	350	250	250	250	250	250	150	150	150	150	100
178	650	550	400	350	250	250	250	250	250	150	150	150	150	100
168	650	550	400	350	250	250	250	250	250	150	150	150	150	100
158	500	450	300	300	200	200	200	200	200	150	150	150	150	100
149	500	450	300	300	200	200	200	200	200	150	150	150	150	100
139	500	450	300	300	200	200	200	200	200	150	150	150	150	100
131	500	450	300	300	200	200	200	200	200	150	150	150	150	100
129	300	300	200	200	100	100	100	100	100	100	100	100	100	100
119	300	300	200	200	100	100	100	100	100	100	100	100	100	100
109	300	300	200	200	100	100	100	100	100	100	100	100	100	100
99	250	250	150	150	100	100	100	100	100	100	100	100	100	100
89	250	250	150	150	100	100	100	100	100	100	100	100	100	100
79	250	250	150	150	100	100	100	100	100	100	100	100	100	100
69	250	250	150	150	100	100	100	100	100	100	100	100	100	100
65	200	200	150	150	100	100	100	100	100	100	100	100	100	100

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

Application Method 2

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drench Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

For all applications, use buffer zone tables 1 - 3 within these recommended permit conditions. The buffer zone tables attached to this document have been developed for each product, and are arranged by the percentage of active ingredient.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drench Applications,
Continued

Restrictions near Schools, Day care centers, and Preschools

1. All applications are prohibited ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. For applications made greater than ½ mile up to 1 mile from the perimeter of a school property, unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of application, several restrictions apply including:
   - A minimum of three post-application water treatments;
   - field monitoring every hour for 12 hours following application; and
   - applications that comply with the "Application Method Requirements" and "Emergency Response Measures: Offsite Movement Suppression Requirements" as described below.

Continued on next page

Application method requirements

1. The following requirements apply to all drench applications of metam sodium and metam potassium (see Tables 1 and 2 for maximum acreage allowed in a 24-hour period):
   - All application equipment must be inspected immediately prior to use to assure it is in good working condition.
   - All irrigation equipment that will be used for post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment") must be inspected and tested prior to beginning the application to assure it is in good working condition.

Table 1. Maximum Size of Application Block Treated Within 24 Hours for Drench Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Maximum Application Block Size
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	25 acres
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	50 acres

*See Appendix I for definition of "School"

Continued on next page

Application method requirements (continued)

Table 2. Maximum Size of Application Block Treated Within 24 Hours for Drench Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Maximum Application Block Size
¼ mile or less	25 acres
Greater than ¼ mile	50 acres

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

2. Maximum application rates differ based on ozone nonattainment areas and date of application.
3. Application Rate 1:
    i. These rates are not allowed in the San Joaquin Valley, Southeast Desert, or Ventura ozone nonattainment areas between May 1 to October 31.
    ii. Metam sodium application rate must not exceed 246 lbs ai/A.
    iii. Metam potassium application rate must not exceed 270 lbs ai/A.
4. Application Rate 2:
    i. These rates are allowed year round and statewide including in all nonattainment areas.
    ii. Metam sodium application rate must not exceed 90 lbs ai/A.
    iii. Metam potassium application rate must not exceed 98 lbs ai/A.

Offsite movement suppression requirements: emergency response measures

For all drench applications, the certified applicator supervising the application must verify that the operator of the property to be fumigated has the capability to respond to offsite movement of MITC. The specific capability required is shown in Tables 3 and 4. The supervising certified applicator must document that capability in the Emergency Response Plan located in the Fumigation Management Plan.

Continued on next page

Offsite movement suppression requirements: emergency response measures (continued)

Table 3. Required Capability to Suppress Offsite Movement Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.

*See Appendix I for definition of "School"

Continued on next page

Offsite movement suppression requirements: emergency response measures (continued)

Table 4. Required Capability to Suppress Offsite Movement Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure of Bystander Area*	Water Treatment Requirements
¼ mile or less	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than ¼ mile up to 1 mile	Irrigation equipment and water available for 24 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than 1 mile	Not required

*See Appendix I for definitions of "Occupied Structure" and "Bystander Areas"

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drench Applications,
Continued

Offsite movement suppression requirements: emergency response measures (continued)

1. When planning to use water to suppress offsite movement, the certified applicator supervising the application must select, and document in the Emergency Response Plan located in the Fumigation Management Plan, a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The ranges of 0.20–0.40 inches of water and 0.15–0.25 inches per hour allow the CAC to determine the amount of water required based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.
2. Follow the application site monitoring requirements under "Application Site Monitoring Requirements" detailed later in these permit conditions.
3. Whenever offsite movement of MITC is detected, cease the application (if still underway) and initiate the Emergency Response Plan indicated in the Fumigation Management Plan.
4. The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
5. Obtain authorization from the CAC prior to restarting any application that has been ceased due to a response.

Permit application

Permit applications must include a map of all "occupied structures" and "bystander areas" (See Appendix I for definitions of "Occupied Structure" and "Bystander Areas") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drench Applications,
Continued

Notice of intent (continued)

- The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
- The method of post-application treatment to be used to suppress offsite movement, including number of post-application water treatments, if applicable.
- The buffer zone size and buffer zone duration if longer than required by the label.
- The certified applicator's 24-hour contact telephone number.
- Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.)
- Proof that sufficient water is available for application, post-application water treatment, and offsite movement suppression requirements. (Attach proof to Fumigation Management Plan.)
- Proof of sufficient soil if soil capping can be used in lieu of water for the offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
- Include the map required for the Fumigation Management Plan in the NOI.

Application timing

Metam sodium and metam potassium drench applications must start no earlier than 1 hour after sunrise and must be completed in time to allow post-application water treatments to begin no later than 1 hour before sunset.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drench Applications,
Continued

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone tables on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium drench applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium drench applications require a minimum buffer zone of 90 feet.
     iii. Use buffer zone Tables 1 - 3 as appropriate based on the product to determine the buffer zone distance.
     iv. If the tables do not capture the specific acreage or application rate, round up to the nearest acre or rate.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If a written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.

Continued on next page

Application site monitoring requirements (continued)

- Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
    - Monitoring must be done at the outer edge of the buffer zone.
    - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
    - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
    - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).

2. Pre-Application
    - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.
3. During Application
    - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
        - Wind speed and wind direction; and
        - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms exposure, equipment failure, or spill).
4. Post-application
    - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have the authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
    - Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application form DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 5 and 6:

Continued on next page

Application site monitoring requirements (continued)

Table 5. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every hour

*See Appendix I for definition of "School"

Table 6. Frequency of Post-Application Monitoring Required Near "Occupied Structure" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Post-application watering information (see "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225"). Record start and stop times for water treatments, as well as total inches applied.
- Any unusual conditions observed at the application site (e.g., odor, reported symptoms of exposure, equipment failure, or spill).
- Monitoring must be done in all directions on calm days.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drench Applications,
Continued

Post-application water treatments

1. Post-application water treatments are required and must be recorded on the "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225" or equivalent form and attached to the Post-Application Summary.
2. Water can be applied at any time in response to odor or illness.
3. For each post-application water treatment discussed below, the certified applicator supervising the application must ensure a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The 0.20–0.40 inch range allows the CAC to determine the amount of water required, based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.

   Use the following timing for whichever post-application water treatments are applied:
   - Post-application water 1 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, starting within 30 minutes of completion of the application.
   - Post-application water 2 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the same day of application, beginning no earlier than 1 hour before sunset and completing by midnight.
   - Post-application water 3 (Day 2)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the day following the application, beginning no earlier than 1 hour before sunset and completing by midnight.

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Buffer Zone Table 1: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Drench Applications with **Three** Post-Application Water Treatments

	Application Block Size (acres)																
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
8	100	100	100	100	100	100	100	100	100	100	100	100	100	102	109	125	141
9	100	100	100	100	100	100	100	100	100	100	100	103	113	122	131	150	169
11	100	100	100	100	100	100	100	100	100	100	100	120	131	142	153	175	197
13	100	100	100	100	100	100	100	100	100	100	113	138	150	163	175	200	225
14	100	100	100	100	100	100	100	100	100	100	127	155	169	183	197	225	253
16	100	100	100	100	100	100	100	100	102	109	141	172	188	203	219	250	281
17	100	100	100	100	100	100	100	103	112	120	155	189	206	223	241	275	309
19	100	100	100	100	100	100	106	113	122	131	169	206	225	244	263	300	338
20	100	100	100	100	102	108	115	122	132	142	183	223	244	264	284	325	366
22	100	100	100	102	109	117	124	131	142	153	197	241	263	284	306	350	394
24	100	100	101	109	117	125	133	141	152	164	211	258	281	305	328	375	422
25	100	100	108	117	125	134	142	150	163	175	225	275	300	325	350	400	450
27	100	106	115	124	133	142	150	159	173	186	239	292	319	345	372	425	478
28	102	112	122	131	141	150	159	169	183	197	253	309	338	366	394	450	506
30	108	118	128	138	148	159	168	178	193	208	267	327	356	386	416	475	534
31	114	124	135	146	156	167	177	188	203	219	281	344	375	406	438	500	563
33	119	131	142	153	164	175	186	197	213	230	295	361	394	427	459	525	591
35	125	137	149	160	172	184	195	206	223	241	309	378	413	447	481	550	619
36	131	143	155	167	180	192	203	216	234	252	323	395	431	467	503	575	647
38	137	149	162	175	188	200	212	225	244	263	338	413	450	488	525	600	675
39	142	155	169	182	195	209	221	234	254	273	352	430	469	508	547	625	703
41	148	162	176	189	203	217	230	244	264	284	366	447	488	528	569	650	731
42	154	168	182	197	211	225	239	253	274	295	380	464	506	548	591	675	759
44	159	174	189	204	219	234	248	263	284	306	394	481	525	569	613	700	788
46	165	180	196	211	227	242	256	272	295	317	408	498	544	589	634	725	816
47	171	187	203	218	234	250	265	281	305	328	422	516	563	609	656	750	844

	Application Block Size (acres)																
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
49	176	193	209	226	242	259	274	291	315	339	436	533	581	630	678	775	872
50	182	199	216	233	250	267	283	300	325	350	450	550	600	650	700	800	900
52	188	205	223	240	258	275	292	309	335	361	464	567	619	670	722	825	928
53	193	211	230	248	266	284	301	319	345	372	478	584	638	691	744	850	956
55	199	218	236	255	273	292	310	328	355	383	492	602	656	711	766	875	984
57	205	224	243	262	281	300	318	338	366	394	506	619	675	731	788	900	1013
58	210	230	250	269	289	309	327	347	376	405	520	636	694	752	809	925	1041
60	216	236	257	277	297	317	336	356	386	416	534	653	713	772	831	950	1069
61	222	243	263	284	305	325	345	366	396	427	548	670	731	792	853	975	1097
63	228	249	270	291	313	334	354	375	406	438	563	688	750	813	875	1000	1125
64	233	255	277	299	320	342	363	384	416	448	577	705	769	833	897	1025	1153
66	239	261	284	306	328	350	371	394	427	459	591	722	788	853	919	1050	1181
68	245	267	290	313	336	359	380	403	437	470	605	739	806	873	941	1075	1209
69	250	274	297	320	344	367	389	413	447	481	619	756	825	894	963	1100	1238
71	256	280	304	328	352	375	398	422	457	492	633	773	844	914	984	1125	1266
72	262	286	311	335	359	384	407	431	467	503	647	791	863	934	1006	1150	1294
74	267	292	317	342	367	392	416	441	477	514	661	808	881	955	1028	1175	1322
75	273	299	324	350	375	401	425	450	488	525	675	825	900	975	1050	1200	1350
77	279	305	331	357	383	409	433	459	498	536	689	842	919	995	1072	1225	1378

Buffer Zone Table 2: Sectagon 42, Vapam HL, Metam 426, and Metam CLR (42-42.2% metam Sodium)
Buffer Zone Values for Drench Applications with **Three** Post-Application Water Treatments

	Application Block Size (acres)																
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
6	100	100	100	100	100	100	100	100	100	100	100	100	100	102	109	125	141
7	100	100	100	100	100	100	100	100	100	100	100	103	113	122	131	150	169
8	100	100	100	100	100	100	100	100	100	100	100	120	131	142	153	175	197
9	100	100	100	100	100	100	100	100	100	100	113	138	150	163	175	200	225
11	100	100	100	100	100	100	100	100	100	100	127	155	169	183	197	225	253
12	100	100	100	100	100	100	100	100	102	109	141	172	188	203	219	250	281
13	100	100	100	100	100	100	100	103	112	120	155	189	206	223	241	275	309
14	100	100	100	100	100	100	106	113	122	131	169	206	225	244	263	300	338
15	100	100	100	100	102	108	115	122	132	142	183	223	244	264	284	325	366
16	100	100	100	102	109	117	124	131	142	153	197	241	263	284	306	350	394
18	100	100	101	109	117	125	133	141	152	164	211	258	281	305	328	375	422
19	100	100	108	117	125	134	142	150	163	175	225	275	300	325	350	400	450
20	100	106	115	124	133	142	150	159	173	186	239	292	319	345	372	425	478
21	102	112	122	131	141	150	159	169	183	197	253	309	338	366	394	450	506
22	108	118	128	138	148	159	168	178	193	208	267	327	356	386	416	475	534
23	114	124	135	146	156	167	177	188	203	219	281	344	375	406	438	500	563
25	119	131	142	153	164	175	186	197	213	230	295	361	394	427	459	525	591
26	125	137	149	160	172	184	195	206	223	241	309	378	413	447	481	550	619
27	131	143	155	167	180	192	203	216	234	252	323	395	431	467	503	575	647
28	137	149	162	175	188	200	212	225	244	263	338	413	450	488	525	600	675
29	142	155	169	182	195	209	221	234	254	273	352	430	469	508	547	625	703
31	148	162	176	189	203	217	230	244	264	284	366	447	488	528	569	650	731
32	154	168	182	197	211	225	239	253	274	295	380	464	506	548	591	675	759
33	159	174	189	204	219	234	248	263	284	306	394	481	525	569	613	700	788
34	165	180	196	211	227	242	256	272	295	317	408	498	544	589	634	725	816
35	171	187	203	218	234	250	265	281	305	328	422	516	563	609	656	750	844

	Application Block Size (acres)																
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
36	176	193	209	226	242	259	274	291	315	339	436	533	581	630	678	775	872
38	182	199	216	233	250	267	283	300	325	350	450	550	600	650	700	800	900
39	188	205	223	240	258	275	292	309	335	361	464	567	619	670	722	825	928
40	193	211	230	248	266	284	301	319	345	372	478	584	638	691	744	850	956
41	199	218	236	255	273	292	310	328	355	383	492	602	656	711	766	875	984
42	205	224	243	262	281	300	318	338	366	394	506	619	675	731	788	900	1013
43	210	230	250	269	289	309	327	347	376	405	520	636	694	752	809	925	1041
45	216	236	257	277	297	317	336	356	386	416	534	653	713	772	831	950	1069
46	222	243	263	284	305	325	345	366	396	427	548	670	731	792	853	975	1097
47	228	249	270	291	313	334	354	375	406	438	563	688	750	813	875	1000	1125
48	233	255	277	299	320	342	363	384	416	448	577	705	769	833	897	1025	1153
49	239	261	284	306	328	350	371	394	427	459	591	722	788	853	919	1050	1181
50	245	267	290	313	336	359	380	403	437	470	605	739	806	873	941	1075	1209
52	250	274	297	320	344	367	389	413	447	481	619	756	825	894	963	1100	1238
53	256	280	304	328	352	375	398	422	457	492	633	773	844	914	984	1125	1266
54	262	286	311	335	359	384	407	431	467	503	647	791	863	934	1006	1150	1294
55	267	292	317	342	367	392	416	441	477	514	661	808	881	955	1028	1175	1322
56	273	299	324	350	375	401	425	450	488	525	675	825	900	975	1050	1200	1350
58	279	305	331	357	383	409	433	459	498	536	689	842	919	995	1072	1225	1378

Buffer Zone Table 3: K-Pam HL and Sectagon K-54 (54% metam potassium)
Buffer Zone Values for Drench Application with **Three** Post Application Water Treatments

	Application Block Size (acres)																
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
5	90	90	90	90	90	90	90	90	90	90	90	90	94	102	109	125	141
6	90	90	90	90	90	90	90	90	90	90	90	103	113	122	131	150	169
7	90	90	90	90	90	90	90	90	90	90	98	120	131	142	153	175	197
8	90	90	90	90	90	90	90	90	90	90	113	138	150	163	175	200	225
9	90	90	90	90	90	90	90	90	91	98	127	155	169	183	197	225	253
10	90	90	90	90	90	90	90	94	102	109	141	172	188	203	219	250	281
11	90	90	90	90	90	92	97	103	112	120	155	189	206	223	241	275	309
12	90	90	90	90	94	100	106	113	122	131	169	206	225	244	263	300	338
13	90	90	90	95	102	108	115	122	132	142	183	223	244	264	284	325	366
14	90	90	95	102	109	117	124	131	142	153	197	241	263	284	306	350	394
16	91	100	108	117	125	134	142	150	163	175	225	275	300	325	350	400	450
17	97	106	115	124	133	142	150	159	173	186	239	292	319	345	372	425	478
18	108	118	128	138	148	159	168	178	193	208	267	327	356	386	416	475	534
19	114	124	135	146	156	167	177	188	203	219	281	344	375	406	438	500	563
20	119	131	142	153	164	175	186	197	213	230	295	361	394	427	459	525	591
21	125	137	149	160	172	184	195	206	223	241	309	378	413	447	481	550	619
22	131	143	155	167	180	192	203	216	234	252	323	395	431	457	503	575	647
23	137	149	162	175	188	200	212	225	244	263	338	413	450	488	525	600	675
24	142	155	169	182	195	209	221	234	254	273	352	430	469	508	547	625	703
25	148	162	176	189	203	217	230	244	264	284	366	447	488	528	569	650	731
26	154	168	182	197	211	225	239	253	274	295	380	464	506	548	591	675	759
27	159	174	189	204	219	234	248	263	284	306	394	481	525	569	613	700	788
28	165	180	196	211	227	242	256	272	295	317	408	498	544	589	634	725	816
29	171	187	203	218	234	250	265	281	305	328	422	516	563	609	656	750	844
30	176	193	209	226	242	259	274	291	315	339	436	533	581	630	678	775	872
31	182	199	216	233	250	267	283	300	325	350	450	550	600	650	700	800	900

	Application Block Size (acres)																
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**50**
32	188	205	223	240	258	275	292	309	335	361	464	567	619	670	722	825	928
33	193	211	230	248	266	284	301	319	345	372	478	584	638	691	744	850	956
34	199	218	236	255	273	292	310	328	355	383	492	602	656	711	766	875	984
35	205	224	243	262	281	300	318	338	366	394	506	619	675	731	788	900	1013
36	210	230	250	269	289	309	327	347	376	405	520	636	694	752	809	925	1041
37	216	236	257	277	297	317	336	356	386	416	534	653	713	772	831	950	1069
38	222	243	263	284	305	325	345	366	396	427	548	670	731	792	853	975	1097
39	228	249	270	291	313	334	354	375	406	438	563	688	750	813	875	1000	1125
40	233	255	277	299	320	342	363	384	416	448	577	705	769	833	897	1025	1153
41	239	261	284	306	328	350	371	394	427	459	591	722	788	853	919	1050	1181
42	245	267	290	313	336	359	380	403	437	470	605	739	806	873	941	1075	1209
43	250	274	297	320	344	367	389	413	447	481	619	756	825	894	963	1100	1238
44	256	280	304	328	352	375	398	422	457	492	633	773	844	914	984	1125	1266
45	262	286	311	335	359	384	407	431	467	503	647	791	863	934	1006	1150	1294
46	267	292	317	342	367	392	416	441	477	514	661	808	881	955	1028	1175	1322
47	273	299	324	350	375	401	425	450	488	525	675	825	900	975	1050	1200	1350
48	279	305	331	357	383	409	433	459	498	536	689	842	919	995	1072	1225	1378

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

Application Method 3

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drip Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drip Applications,
Continued

Restrictions near Schools, Day care centers, and Preschools

1. When made to more than 5 acres, applications are prohibited when ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. When made to 5 acres or less applications are prohibited when ¼ mile or less from the perimeter of a school property unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.

Application method requirements

The following requirements apply to all drip applications of metam sodium and metam potassium:

- All application equipment must be inspected immediately prior to use to assure it is in good working condition.
- All irrigation equipment that will be used for post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment") must be inspected and tested prior to beginning the application to assure it is in good working condition.
- Drip system must be filled with water and tested for pressure variation, clogged emitters, and leaks before chemigation. The pressure must not exceed the pressure rating of the drip tape, and the pressure variation in the drip tape throughout the field must be less than three pounds per square inch. Drip system must be free of leaks and clogged emitters.
- After application, the drip system must be flushed with a volume of water at least three times the volume of the mainline and laterals of the drip system.
- The permittee or permittee's authorized representative, who is knowledgeable of the irrigation system, must be present at the treatment site during the application and must be trained as a pesticide handler.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drip Applications,
Continued

Permit application	Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all "schools" within 1 mile of the fumigation site.
Notice of intent	1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation. 2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI: • The number of application blocks to be treated and acreage of each application block. • The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC. • The buffer zone size and buffer zone duration if longer than required by the label. • The certified applicator's 24-hour contact telephone number. • Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.) • Include the map required for the Fumigation Management Plan in the NOI.
Application timing	Metam sodium and metam potassium drip applications must start no earlier than 1 hour after sunrise and must be completed no later than 1 hour before sunset.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drip Applications,
Continued

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone tables on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium drip applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium drip applications require a minimum buffer zone of 90 feet.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If the written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Drip Applications,
Continued

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
   - Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
     - Monitoring must be done at the outer edge of the buffer zone.
     - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
     - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
     - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).
   - The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
2. Pre-Application
   - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.

Continued on next page

Application site monitoring requirements (continued)

3. During Application
   - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
     - Wind speed and wind direction: and
     - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms of exposure, equipment failure, or spill).
4. Post-application
   - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have the authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
   - Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application form DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 1 and 2:

Table 1. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session **(application block size must be 5 acres or less)**	Every hour
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every 2 hours

*See Appendix I for definition of "School"

Continued on next page

Application site monitoring requirements (continued)

Table 2. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Any unusual conditions observed at or adjacent to the application site (e.g., dry soil conditions, odor, irrigation equipment failure, or spill).
- Monitoring must be done in all directions on calm days.

Post-application water treatments

Post-application water is not required for drip applications. However, the operator of the property must have sufficient water or untreated soil available, and have the means to apply them at any time in response to odor or illness.

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

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Application Method 4

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Flood Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Restrictions near Schools, Day care centers, and Preschools

1. All applications are prohibited ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Flood Applications,
Continued

Restrictions near Schools, Day care centers, and Preschools (continued)

2. For applications made greater than ½ mile up to 1 mile from the perimeter of a school property, unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of application, several restrictions apply including:
   - field monitoring every hour for 12 hours following application; and
   - applications that comply with the "Application Method Requirements" and "Emergency Response Measures: Offsite Movement Suppression Requirements" as described below.

Application method requirements

1. Flood applications are not allowed in the San Joaquin Valley, Southeast Desert, or Ventura ozone nonattainment areas between May 1 to October 31.
2. Unless required otherwise, the fumigant must be applied with at least 4 inches of water per acre.
3. Application block size cannot exceed 80 acres in a 24-hour period.

Table 1. Maximum Size of Application Block Treated Within 24 Hours for Flood Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Maximum Application Block Size
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	40 acres
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	80 acres

*See Appendix I for definition of "School"

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Flood Applications,
Continued

Application method requirements (continued)

Table 2. Maximum Size of Application Block Treated Within 24 Hours for Flood Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Maximum Application Block Size
¼ mile or less	40 acres
Greater than ¼ mile	80 acres

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Offsite movement suppression requirements: emergency response measures

For all flood applications, the certified applicator supervising the application must verify that the operator of the property to be fumigated has the capability to respond to offsite movement of MITC. The specific capability required is shown in Tables 3 and 4. The supervising certified applicator must document that capability in the Emergency Response Plan located in the Fumigation Management Plan.

Table 3. Required Capability to Suppress Offsite Movement Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Irrigation equipment and water available for 48 hours post-application

*See Appendix I for definition of "School"

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Offsite movement suppression requirements: emergency response measures (continued)

Table 4. Required Capability to Suppress Offsite Movement Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Irrigation equipment and water available for 48 hours post-application
Greater than ¼ mile up to 1 mile	Irrigation equipment and water available for 24 hours post-application
Greater than 1 mile	Exempt (not required)

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

1. When planning to use water to suppress offsite movement, the certified applicator supervising the application must select, and document in the Emergency Response Plan located on the Fumigation Management Plan, a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The ranges of 0.20–0.40 inches of water and 0.15–0.25 inches per hour allow the CAC to determine the amount of water required based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.
2. Follow application site monitoring requirements under "Application Site Monitoring Requirements" detailed later in these permit conditions.
3. Whenever offsite movement of MITC is detected, cease the application (if still underway) and initiate the Emergency Response Plan indicated in the Fumigation Management Plan.
4. The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
5. Obtain authorization from the CAC prior to restarting any application that has been ceased due to a response.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Flood Applications,
Continued

Permit application	Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.
Notice of intent	1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation. 2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI: • The number of application blocks to be treated and acreage of each application block. • The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC. • The buffer zone size and buffer zone duration if longer than required by the label. • The certified applicator's 24-hour contact telephone number. • Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.) • Proof of sufficient water availability for application and offsite movement suppression requirements. (Attach proof to Fumigation Management Plan.) • Include the map required for Fumigation Management Plan in the NOI.
Application timing	There is no timing restriction on flood application.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Flood Applications,
Continued

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone tables on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium flood injection applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium flood injection applications require a minimum buffer zone of 90 feet.
     iii. No application may exceed 80 acres in a 24-hour period.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If the written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.

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Application site monitoring requirements (continued)

- Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
    - Monitoring must be done at the outer edge of the buffer zone.
    - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
    - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
    - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).

2. Pre-Application
    - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.
3. During Application
    - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
        - Wind speed and wind direction; and
        - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms of exposure, equipment failure, or spill).
4. Post-application
    - On the day of application, the certified applicator supervising the application must ensure that a trained handler is present at the site continually from 1 hour before sunrise through 1 hour after sunset, in addition to the periods required to conduct post-application monitoring. If the trained handler is an employee, he or she must either have the authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.

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Application site monitoring requirements (continued)

- Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 5 and 6:

Table 5. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every hour

*See Appendix I for definition of "School"

Table 6. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Post-application watering information (see "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225"). Record start and stop times for water treatments, as well as total inches applied.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Flood Applications,
Continued

Application site monitoring requirements (continued)	• Any unusual conditions observed at the application site (e.g., dry soil conditions, odor, irrigation equipment failure or spill). • Monitoring must be done in all directions on calm days.
Post-application water treatments	Flood applications do not require post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment").

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

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Application Method 5

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications, Continued

Restrictions near Schools, Day care centers, and Preschools

1. When made to more than 5 acres, applications are prohibited when ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. When made to 5 acres or less, applications are prohibited when ¼ mile or less from the perimeter of a school property unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.

Application method requirements

The following requirements apply to all power mulcher and rotary tiller (rototiller) applications of metam sodium and metam potassium:

1. All application equipment must be inspected immediately prior to use to assure it is in good working condition.
2. The treated area must be covered with 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.

Permit application

Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications, Continued

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.
   - The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
   - The buffer zone size and buffer zone duration if longer than required by the label.
   - The certified applicator's 24-hour contact telephone number.
   - Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.)
   - Include the map required for the Fumigation Management Plan in the NOI.

Application timing

Metam sodium and metam potassium power mulcher and rotary tiller (rototiller) applications must start no earlier than 1 hour after sunrise and must be completed no later than 1 hour before sunset.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications, Continued

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone tables on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium power mulcher and rotary tiller (rototiller) applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium power mulcher and rotary tiller (rototiller) applications require a minimum buffer zone of 90 feet.
     iii. No application may exceed 80 acres in a 24-hour period.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If the written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications, Continued

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
   - Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
     - Monitoring must be done at the outer edge of the buffer zone.
     - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
     - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
     - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).
   - The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
2. Pre-Application
   - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications, Continued

Application site monitoring requirements (continued)

3. During Application
   - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
     - Wind speed and wind direction: and
     - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms exposure, equipment failure, or spill).
4. Post-application
   - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
   - Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 1 and 2.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Power Mulcher and Rotary Tiller (Rototiller) Applications, Continued

Application site monitoring requirements (continued)

Table 1. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session **(application block size must be 5 acres or less)**	Every hour
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every 2 hours

*See Appendix I for definition of "School"

Table 2. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Any unusual conditions observed at or adjacent to the application site (e.g., dry soil conditions, odor, irrigation, equipment failure, or spill).

Post-application water treatments

Post-application water is not required for power mulcher or rotary tiller applications. However, the operator of the property should have sufficient water or untreated soil available, and have the means to apply them at any time in response to odor or illness.

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)".

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

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Application Method 6

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Rod Bar Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

The rod bar application method is a variation of the bedded shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

DPR recommends prohibiting metam sodium and metam potassium rod bar applications with no post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment") made. In contrast, for applications with 1, 2, or 3 post-application water treatments, use the buffer zone tables 1 through 9 within these recommended permit conditions. The buffer zone tables attached to this document have been developed for each product, and are arranged by the percentage of active ingredient.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Rod Bar Applications,
Continued

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Restrictions near Schools, Day care centers, and Preschools

1. All applications are prohibited ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. For applications made greater than ½ mile up to 1 mile from the perimeter of a school property, unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of application, several restrictions apply including:
   - A minimum of three post-application water treatments;
   - field monitoring every hour for 12 hours following application; and
   - applications that comply with the "Application Method Requirements" and "Emergency Response Measures: Offsite Movement Suppression Requirements" as described below.

Application method requirements

1. The following requirements apply to all rod bar applications of metam sodium and metam potassium:
   - All application equipment must be inspected immediately prior to use to assure it is in good working condition.
   - All irrigation equipment that will be used for post-application water treatments must be inspected and tested prior to beginning the application to assure it is in good working condition.
2. Application block size cannot exceed 80 acres within a 24-hour period.

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Application method requirements (continued)

Table 1. Maximum Size of Application Block Treated Within 24 Hours for Rod Bar Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Maximum Application Block Size
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	40 acres
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	80 acres

*See Appendix I for definition of "School"

Table 2. Maximum Size of Application Block Treated Within 24 Hours for Rod Bar Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Maximum Application Block Size
¼ mile or less	40 acres
Greater than ¼ mile	80 acres

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

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Offsite movement suppression requirements: emergency response measures

For all rod bar applications, the certified applicator supervising the application must verify that the operator of the property to be fumigated has the capability to respond to offsite movement of MITC. The specific capability required is shown in Tables 3 and 4. The supervising certified applicator must document that capability in the Emergency Response Plan located in the Fumigation Management Plan.

Table 3. Required Capability to Suppress Offsite Movement Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.

*See Appendix I for definition of "School"

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Offsite movement suppression requirements: emergency response measures (continued)

Table 4. Required Capability to Suppress Offsite Movement Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than ¼ mile up to 1 mile	Irrigation equipment and water available for 24 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than 1 mile	Exempt (not required)

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

1. When planning to use water to suppress offsite movement, the certified applicator supervising the application must select, and document in the Emergency Response Plan located on the Fumigation Management Plan, a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

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Offsite movement suppression requirements: emergency response measures (continued)

The ranges of 0.20–0.40 inches of water, and 0.15–0.25 inches per hour, allow the CAC to determine the amount of water required based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.

2. Follow the application site monitoring requirements under "Application Site Monitoring Requirements" detailed later in these permit conditions.
3. Whenever offsite movement of MITC is detected, cease the application (if still underway) and initiate the Emergency Response Plan indicated in the Fumigation Management Plan.
4. The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
5. Obtain authorization from the CAC prior to restarting any application that has been ceased due to a response.

Permit application

Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.
   - The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
   - The method of post-application treatment to be used to suppress offsite movement, including number of post-application water treatments, if applicable.
   - The buffer zone size and buffer zone duration if longer than required by the label.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Rod Bar Applications,
Continued

Notice of intent (continued)

- The certified applicator's 24-hour contact telephone number.
- Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.)
- Proof that sufficient water is available for application, post-application water treatment, and offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
- Proof of sufficient soil if soil capping can be used in lieu of water for the offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
- Include the map required for the Fumigation Management Plan in the NOI.

Application timing

Metam sodium and metam potassium rod bar applications must start no earlier than 1 hour after sunrise and must be completed in time to allow post-application water treatments to begin no later than 1 hour before sunset.

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone tables on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium rod bar applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium rod bar applications require a minimum buffer zone of 90 feet.
     iii. Use Buffer Zone Tables 1 through 9 as appropriate based on the product and number of post-application water treatments to determine the buffer zone distance.
     iv. If the tables do not capture the specific acreage or application rate, round up to the nearest acre or rate.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Rod Bar Applications,
Continued

Buffer zones (continued)

3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If the written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
   - Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
     - Monitoring must be done at the outer edge of the buffer zone.
     - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
     - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
     - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).

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Application site monitoring requirements (continued)

2. Pre-Application
   - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.
3. During Application
   - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
     - Wind speed and wind direction; and
     - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms exposure, equipment failure, or spill).
4. Post-application
   - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
   - Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 5 and 6:

Table 5. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every hour

*See Appendix I for definition of "School"

Continued on next page

Application site monitoring requirements (continued)

Table 6. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Post-application watering information (see Post-Application Water Treatments (Field Fumigation) form DPR-ENF-225"). Record start and stop times for water treatments, as well as total inches applied.
- Any unusual conditions observed at the application site (e.g., dry soil conditions, odor, irrigation equipment failure, or spill).
- Monitoring must be done in all directions on calm days.

Post-application water treatments

1. Post-application water treatments are required and must be recorded on the "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225" or equivalent form and attached to the Post-Application Summary.
2. Water can be applied at any time in response to odor or illness.
3. For each post-application water treatment discussed below, the certified applicator supervising the application must ensure a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - Total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The 0.20–0.40 inch range allows the CAC to determine the amount of water required, based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.

Continued on next page

Post-application water treatments (continued)

Table 7. Post-Application Water Treatments Required for Rod Bar Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Minimum of 3 water treatments (CAC discretion to reduce to 2)
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	Minimum of 2 water treatments (CAC discretion to reduce to 1)

*See Appendix I for definition of "School"

Table 8. Post-Application Water Treatments Required for Rod Bar Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Minimum of 3 water treatments (CAC discretion to reduce to 2)
Greater than ¼ mile	Minimum of 2 water treatments (CAC discretion to reduce to 1)

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Continued on next page

Post-application water treatments (continued)

Use the following timing for whichever post-application water treatments are applied:

- Post-application water 1 (Day 1)—Apply a minimum of 0.20–0.4 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, starting within 30 minutes of completion of the application.
- Post-application water 2 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the same day of application, beginning no earlier than 1 hour before sunset and completing by midnight.
- Post-application water 3 (Day 2)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the day following the application, beginning no earlier than 1 hour before sunset and completing by midnight.

1. CAC Discretion
   - The CAC has the option to eliminate the third post-application water treatment requirement for application blocks ¼ mile or less from an occupied structure or bystander area based on an evaluation of the soil type and moisture content, knowledge of local conditions, and effective offsite movement control measures previously used, provided that the application block is greater than ½ mile to 1 mile from the perimeter of a school property (unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application). Use the buffer zones for two post-application water treatments if the third post-application water treatment is eliminated.
   - The CAC has the option to eliminate the second post-application water treatment requirement for application blocks greater than ¼ mile from an occupied structure, or bystander area based on an evaluation of the soil type and moisture content, knowledge of local conditions, and effective offsite movement control measures previously used, provided that the application block is greater than 1 mile from the perimeter of school property (unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application). Use buffer zones for one post-application water treatment if the second post-application water treatment is eliminated.

Buffer Zone Table 1: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Rod Bar Applications with **Three** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
≤24	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	150	175	175	213	213	250	250
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	175	200	200	238	238	275	275
27	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	206	206	238	238	274	274	311	311
28	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	238	238	275	275	311	311	348	348
30	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	225	269	269	313	313	348	348	384	384
31	100	100	100	100	100	100	100	100	100	100	100	150	175	200	225	250	300	300	350	350	385	385	420	420
33	100	100	100	100	100	100	100	100	100	100	125	175	206	238	263	288	338	338	388	388	426	426	465	465
35	100	100	100	100	100	100	100	100	100	100	150	200	238	275	300	325	375	375	425	425	468	468	510	510
36	100	100	100	100	100	100	100	100	113	125	175	225	269	313	338	363	413	413	463	463	509	509	555	555
38	100	100	100	100	100	100	105	120	135	150	200	250	300	350	375	400	450	450	500	500	550	550	600	600
39	100	100	100	100	100	103	118	133	148	163	213	263	313	363	388	413	475	475	538	538	594	594	650	650
41	100	100	100	100	100	115	130	145	160	175	225	275	325	375	400	425	500	500	575	575	638	638	700	700
42	100	100	100	100	113	128	143	158	173	188	238	288	338	388	413	438	525	525	613	613	681	681	750	750
44	100	100	100	110	125	140	155	170	185	200	250	300	350	400	425	450	550	550	650	650	725	725	800	800
46	100	100	101	116	131	146	161	176	191	206	263	313	413	425	450	488	581	581	675	675	753	753	831	831
47	100	100	108	123	138	153	168	183	198	213	275	325	425	450	475	525	613	613	700	700	781	781	863	863
49	100	100	114	129	144	159	174	189	204	219	288	338	438	475	500	563	644	644	725	725	809	809	894	894
50	100	105	120	135	150	165	180	195	210	225	300	350	400	450	525	600	675	675	750	750	838	838	925	925
52	100	108	124	139	155	170	186	201	217	232	309	361	413	464	541	619	696	696	773	773	864	864	954	954
53	100	112	128	143	159	175	191	207	223	239	319	372	425	478	558	638	717	717	797	797	890	890	983	983
55	100	115	131	148	164	180	197	213	230	246	328	383	438	492	574	656	738	738	820	820	916	916	1012	1012
57	101	118	135	152	169	186	203	219	236	253	338	394	450	506	591	675	759	759	844	844	942	942	1041	1041
58	104	121	139	156	173	191	208	225	243	260	348	405	463	520	607	694	780	780	867	867	968	968	1070	1070
60	107	125	143	160	178	196	214	232	249	267	356	416	475	534	623	713	802	802	891	891	995	995	1098	1098

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
61	110	128	146	163	183	201	219	238	256	274	366	427	488	548	640	731	823	823	914	914	1021	1021	1127	1127
63	113	131	150	168	188	206	225	244	263	281	375	438	500	563	656	750	844	844	938	938	1047	1047	1156	1156
64	115	135	154	173	192	211	231	250	269	288	384	448	513	577	673	769	865	865	961	961	1073	1073	1185	1185
66	116	138	158	177	197	217	236	256	276	295	394	459	525	591	689	788	886	886	984	984	1099	1099	1214	1214
68	121	141	161	181	202	222	242	262	282	302	403	470	538	605	705	806	907	907	1008	1008	1125	1125	1243	1243
69	124	144	165	186	206	227	248	268	289	309	413	481	550	619	722	825	928	928	1031	1031	1152	1152	1272	1272
71	127	148	169	190	211	232	253	274	295	316	422	492	563	633	738	844	949	949	1055	1055	1178	1178	1301	1301
72	129	151	173	194	216	237	259	280	302	323	431	503	575	647	755	863	970	970	1078	1078	1204	1204	1330	1330
74	132	154	176	198	220	242	264	286	308	330	441	514	588	661	771	881	991	991	1102	1102	1230	1230	1359	1359
75	135	158	180	203	225	248	270	293	315	338	450	525	600	675	788	900	1013	1013	1125	1125	1256	1256	1388	1388

Buffer Zone Table 2: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Rod Bar Applications with **Two** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
≤24	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	150	175	175	213	213	250	250
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	175	200	200	238	238	275	275
27	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	206	206	238	238	274	274	311	311
28	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	238	238	275	275	311	311	348	348
30	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	225	269	269	313	313	348	348	384	384
31	100	100	100	100	100	100	100	100	100	100	100	150	175	200	225	250	300	300	350	350	385	385	420	420
33	100	100	100	100	100	100	100	100	100	100	125	175	206	238	263	288	338	338	388	388	426	426	465	465
35	100	100	100	100	100	100	100	100	100	100	150	200	238	275	300	325	375	375	425	425	468	468	510	510
36	100	100	100	100	100	100	100	100	113	125	175	225	269	313	338	363	413	413	463	463	509	509	555	555
38	100	100	100	100	100	100	105	120	135	150	200	250	300	350	375	400	450	450	500	500	550	550	600	600
39	100	100	100	100	100	103	118	133	148	163	213	263	313	363	388	413	475	475	538	538	594	594	650	650
41	100	100	100	100	100	115	130	145	160	175	225	275	325	375	400	425	500	500	575	575	638	638	700	700
42	100	100	100	100	113	128	143	158	173	188	238	288	338	388	413	438	525	525	613	613	681	681	750	750
44	100	100	100	110	125	140	155	170	185	200	250	300	350	400	425	450	550	550	650	650	725	725	800	800
46	100	100	101	116	131	146	161	176	191	206	263	313	413	425	450	488	581	581	675	675	753	753	831	831
47	100	100	108	123	138	153	168	183	198	213	275	325	425	450	475	525	613	613	700	700	781	781	863	863
49	100	100	114	129	144	159	174	189	204	219	288	338	438	475	500	563	644	644	725	725	809	809	894	894
50	100	105	120	135	150	165	180	195	210	225	300	350	400	450	525	600	675	675	750	750	838	838	925	925
52	100	108	124	139	155	170	186	201	217	232	309	361	413	464	541	619	696	696	773	773	864	864	954	954
53	100	112	128	143	159	175	191	207	223	239	319	372	425	478	558	638	717	717	797	797	890	890	983	983
55	100	115	131	148	164	180	197	213	230	246	328	383	438	492	574	656	738	738	820	820	916	916	1012	1012
57	101	118	135	152	169	186	203	219	236	253	338	394	450	506	591	675	759	759	844	844	942	942	1041	1041
58	104	121	139	156	173	191	208	225	243	260	348	405	463	520	607	694	780	780	867	867	968	968	1070	1070
60	107	125	143	160	178	196	214	232	249	267	356	416	475	534	623	713	802	802	891	891	995	995	1098	1098

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
61	110	128	146	163	183	201	219	238	256	274	366	427	488	548	640	731	823	823	914	914	1021	1021	1127	1127
63	113	131	150	168	188	206	225	244	263	281	375	438	500	563	656	750	844	844	938	938	1047	1047	1156	1156
64	115	135	154	173	192	211	231	250	269	288	384	448	513	577	673	769	865	865	961	961	1073	1073	1185	1185
66	116	138	158	177	197	217	236	256	276	295	394	459	525	591	689	788	886	886	984	984	1099	1099	1214	1214
68	121	141	161	181	202	222	242	262	282	302	403	470	538	605	705	806	907	907	1008	1008	1125	1125	1243	1243
69	124	144	165	186	206	227	248	268	289	309	413	481	550	619	722	825	928	928	1031	1031	1152	1152	1272	1272
71	127	148	169	190	211	232	253	274	295	316	422	492	563	633	738	844	949	949	1055	1055	1178	1178	1301	1301
72	129	151	173	194	216	237	259	280	302	323	431	503	575	647	755	863	970	970	1078	1078	1204	1204	1330	1330
74	132	154	176	198	220	242	264	286	308	330	441	514	588	661	771	881	991	991	1102	1102	1230	1230	1359	1359
75	135	158	180	203	225	248	270	293	315	338	450	525	600	675	788	900	1013	1013	1125	1125	1256	1256	1388	1388

Buffer Zone Table 3: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Rod Bar Applications with **One** Post-Application Water Treatments

							Acres treated																	
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
≤24	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
25	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
27	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
28	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
30	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
31	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
33	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
35	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
36	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
38	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
39	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
41	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
42	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
44	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
46	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
47	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
49	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
50	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
52	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
53	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
55	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
57	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
58	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
61	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
63	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
64	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

							Acres treated																	
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
66	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
68	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
69	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
71	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
72	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
74	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
75	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Buffer Zone Table 3: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium) Buffer Zone Values for Rod Bar Applications with One Post-Application Water Treatments

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
8	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
9	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
11	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
14	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
21	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
22	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
26	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
27	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	105	105
28	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	120	120

								Acres treated																
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
29	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	104	104	136	136
31	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	122	151	151
32	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	115	115	141	141	166	166
33	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	103	103	136	136	159	159	182	182
34	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	118	118	157	157	177	177	197	197
35	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	101	138	138	177	177	200	200	223	223
36	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	157	157	196	196	223	223	249	249
38	100	100	100	100	100	100	100	100	100	100	100	100	100	100	121	144	177	177	216	216	246	246	276	276
39	100	100	100	100	100	100	100	100	100	100	100	150	150	150	150	166	197	197	236	236	269	269	302	302
40	100	100	100	100	100	100	100	100	100	100	100	150	150	150	163	188	217	217	256	256	292	292	328	328
41	100	100	100	100	100	100	100	100	100	100	100	150	150	157	183	209	236	236	275	275	315	315	354	354
42	100	100	100	100	100	100	100	100	100	100	100	150	150	173	199	225	252	252	291	291	334	334	378	378
43	100	100	100	100	100	100	100	100	100	100	100	150	150	189	215	241	268	268	307	307	354	354	401	401
45	100	100	100	100	100	100	100	100	100	100	100	150	165	204	230	258	283	283	322	322	374	374	425	425
46	100	100	100	100	100	100	100	100	100	100	100	150	181	220	248	272	299	299	338	338	393	393	448	448
47	100	100	100	100	100	100	100	100	100	100	100	157	200	236	262	288	315	315	354	354	413	413	472	472
48	100	100	100	100	100	100	100	100	100	100	108	200	204	243	271	299	335	335	374	374	433	433	492	492
49	100	100	100	100	100	100	100	100	100	100	118	200	210	249	280	310	354	354	393	393	453	453	512	512
50	100	100	100	100	100	100	100	100	100	100	128	200	217	256	289	321	374	374	413	413	472	472	532	532
52	100	100	100	100	100	100	100	100	100	100	137	200	223	262	297	332	394	394	433	433	492	492	551	551
53	100	100	100	100	100	100	100	100	100	100	147	200	230	269	306	343	414	414	453	483	512	512	571	571
54	100	100	100	100	100	100	100	100	100	100	157	200	236	275	315	354	433	433	472	472	532	532	591	591
55	100	100	100	100	100	100	100	100	100	110	167	204	243	294	324	365	452	452	491	491	552	552	611	611
56	100	100	100	100	100	100	100	100	102	122	177	211	249	290	333	378	472	472	511	511	572	572	631	631

Buffer Zone Table 5: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Rod Bar Applications with **Two** Post-Application Water Treatments

								Acres treated																
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
8	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
9	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
11	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
14	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
21	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
22	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
26	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
27	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	105	105
28	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	120	120

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
29	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	104	104	136	136
31	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	122	151	151
32	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	115	115	141	141	166	166
33	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	103	103	136	136	159	159	182	182
34	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	118	118	157	157	177	177	197	197
35	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	101	138	138	177	177	200	200	223	223
36	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	157	157	196	196	223	223	249	249
38	100	100	100	100	100	100	100	100	100	100	100	100	100	100	121	144	177	177	216	216	246	246	276	276
39	100	100	100	100	100	100	100	100	100	100	100	150	200	200	200	200	200	200	236	236	269	269	302	302
40	100	100	100	100	100	100	100	100	100	100	100	150	200	200	200	200	217	217	256	256	292	292	328	328
41	100	100	100	100	100	100	100	100	100	100	100	150	200	200	200	209	236	236	275	275	315	315	354	354
42	100	100	100	100	100	100	100	100	100	100	150	150	200	200	200	225	252	252	291	291	334	334	378	378
43	100	100	100	100	100	100	100	100	100	100	150	200	250	250	250	300	300	300	307	307	354	354	401	401
45	100	100	100	100	100	100	100	100	100	100	150	200	250	250	250	300	300	300	322	322	374	374	425	425
46	100	100	100	100	100	100	100	100	100	100	150	200	250	250	250	300	300	300	338	338	393	393	448	448
47	100	100	100	100	100	100	100	100	100	100	150	200	250	250	262	300	315	315	354	354	413	413	472	472
48	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	400	400	433	433	492	492
49	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	400	400	453	453	512	512
50	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	413	413	472	472	532	532
52	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	433	433	492	492	551	551
53	100	100	100	100	100	100	100	100	100	100	200	300	400	400	400	500	500	500	500	500	512	512	571	571
54	100	100	100	100	100	100	100	100	100	100	200	300	400	400	400	500	500	500	500	500	532	532	591	591
55	100	100	100	100	100	100	100	100	100	110	200	300	400	400	400	500	500	500	500	500	552	552	611	611
56	100	100	100	100	100	100	100	100	102	122	200	300	400	400	400	500	500	500	511	511	572	572	631	631

Buffer Zone Table 6: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Rod Bar Applications with **One** Post-Application Water Treatments

								Acres treated																
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
2	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
3	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
4	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
5	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
6	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
7	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
8	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
9	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
11	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
12	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
13	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
14	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
15	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
16	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
18	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
19	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
20	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
21	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
22	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
23	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
25	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
26	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
27	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
28	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
29	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
31	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
32	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
33	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
34	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
35	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
36	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
38	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
39	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
40	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
41	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
42	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
43	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
45	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
48	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
49	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
50	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
52	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
53	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
54	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
55	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
56	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Buffer Zone Table 7: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Rod Bar Applications with **Three** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
2	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
3	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
4	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
5	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
6	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
7	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
8	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
9	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
10	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
12	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
13	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
14	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
15	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
17	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
18	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
19	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
20	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
21	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
22	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	105	105
23	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	120	120
24	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	104	104	136	136
25	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	94	94	122	122	151	151
26	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	115	115	141	141	166	166

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
27	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	103	103	136	136	159	159	182	182
28	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	118	118	157	157	177	177	197	197
29	90	90	90	90	90	90	90	90	90	90	90	135	135	135	135	135	138	138	177	177	200	200	223	223
30	90	90	90	90	90	90	90	90	90	90	90	135	135	135	135	135	157	157	196	196	223	223	249	249
31	90	90	90	90	90	90	90	90	90	90	90	135	135	135	135	144	177	177	216	216	246	246	276	276
32	90	90	90	90	90	90	90	90	90	90	90	135	135	135	142	180	197	197	236	236	269	269	302	302
33	90	90	90	90	90	90	90	90	90	90	90	135	135	135	163	188	217	217	256	256	292	292	328	328
34	90	90	90	90	90	90	90	90	90	90	90	135	135	157	183	209	236	236	275	275	315	315	354	354
35	90	90	90	90	90	90	90	90	90	90	90	180	180	180	199	225	252	252	291	291	334	334	378	378
36	90	90	90	90	90	90	90	90	90	90	90	180	180	189	215	241	268	268	307	307	354	354	401	401
37	90	90	90	90	90	90	90	90	90	90	90	180	180	204	230	256	283	283	322	322	374	374	425	425
38	90	90	90	90	90	90	90	90	90	90	90	180	181	220	246	272	299	299	338	338	393	393	448	448
39	90	90	90	90	90	90	90	90	90	90	98	180	197	236	262	288	315	315	354	354	413	413	472	472
40	90	90	90	90	90	90	90	90	90	90	108	180	204	243	271	299	335	335	374	374	433	433	492	492
41	90	90	90	90	90	90	90	90	90	90	118	180	210	249	280	310	354	354	393	393	453	453	512	512
42	90	90	90	90	90	135	135	135	135	135	135	225	270	270	289	360	374	374	413	413	472	472	532	532
43	90	90	90	90	90	135	135	135	135	135	137	225	270	270	297	360	394	394	433	433	492	492	551	551
44	90	90	90	90	90	135	135	135	135	135	147	225	270	270	306	360	414	414	453	453	512	512	571	571
45	90	90	90	90	90	135	135	135	135	135	157	225	270	275	315	360	433	433	472	472	532	532	591	591
46	90	90	90	90	90	135	135	135	135	135	180	270	315	315	324	405	452	452	491	491	552	552	611	611
47	90	90	90	90	90	135	135	135	135	135	180	270	315	315	333	405	472	472	511	511	572	572	631	631

Buffer Zone Table 8: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Rod Bar Applications with **Two** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
2	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
3	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
4	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
5	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
6	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
7	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
8	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
9	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
10	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
12	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
13	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
14	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
15	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
17	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
18	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
19	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
20	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
21	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
22	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	105	105
23	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	120	120
24	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	104	104	136	136
25	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	94	94	122	122	151	151
26	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	115	115	141	141	166	166

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
27	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	103	103	136	136	159	159	182	182
28	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	118	118	157	157	177	177	197	197
29	90	90	90	90	90	90	90	90	90	90	135	135	180	180	180	180	180	180	180	180	200	200	223	223
30	90	90	90	90	90	90	90	90	90	90	135	135	180	180	180	180	180	180	196	196	223	223	249	249
31	90	90	90	90	90	90	90	90	90	90	135	135	180	180	180	180	180	180	216	216	246	246	276	276
32	90	90	90	90	90	90	90	90	90	90	135	180	225	225	225	270	270	270	270	270	270	270	302	302
33	90	90	90	90	90	90	90	90	90	90	135	180	225	225	225	270	270	270	270	270	292	292	328	328
34	90	90	90	90	90	90	90	90	90	90	135	180	225	225	225	270	270	270	275	275	315	315	354	354
35	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	360	360	378	378
36	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	360	360	401	401
37	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	374	374	425	425
38	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	393	393	448	448
39	90	90	90	90	90	90	90	90	90	90	180	270	360	360	360	450	450	450	450	450	450	450	472	472
40	90	90	90	90	90	90	90	90	90	90	180	270	360	360	360	450	450	450	450	450	450	450	492	492
41	90	90	90	90	90	90	90	90	90	90	180	270	360	360	360	450	450	450	450	450	453	453	512	512
42	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	585	585
43	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	585	585
44	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	585	585
45	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	591	591
46	90	90	90	90	90	180	180	180	180	180	270	360	495	495	495	630	630	630	675	675	675	675	675	675
47	90	90	90	90	90	180	180	180	180	180	270	360	495	495	495	630	630	630	675	675	675	675	675	675

Buffer Zone Table 9: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Rod Bar Applications with **One** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
2	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
3	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
4	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
5	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
6	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
7	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
8	90	90	90	90	90	180	180	180	180	180	225	360	405	405	405	540	720	720	720	720	720	720	720	810
9	90	90	90	90	90	180	180	180	180	180	225	360	405	405	405	540	720	720	720	720	720	720	720	810
10	90	90	90	90	90	180	180	180	180	180	225	360	405	405	405	540	720	720	720	720	720	720	720	810
11	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
12	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
13	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
14	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
15	90	225	225	225	225	450	450	450	450	450	585	765	945	945	945	1170	1305	1305	1305	1305	1305	1305	1305	1575
16	90	225	225	225	225	450	450	450	450	450	585	765	945	945	945	1170	1305	1305	1305	1305	1305	1305	1305	1575
17	90	225	225	225	225	450	450	450	450	450	585	765	945	945	945	1170	1305	1305	1305	1305	1305	1305	1305	1575
18	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
19	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
20	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
21	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
22	90	450	450	450	450	765	765	765	765	765	990	1215	1575	1575	1575	1890	1935	1935	1935	1935	1935	1935	1935	NA
23	90	450	450	450	450	765	765	765	765	765	990	1215	1575	1575	1575	1890	1935	1935	1935	1935	1935	1935	1935	NA
24	90	450	450	450	450	765	765	765	765	765	990	1215	1575	1575	1575	1890	1935	1935	1935	1935	1935	1935	1935	NA
25	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
26	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA
27	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA
28	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA
29	135	630	630	630	630	1035	1035	1035	1035	1035	1350	1665	2070	2070	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA
30	135	630	630	630	630	1035	1035	1035	1035	1035	1350	1665	2070	2070	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA
31	135	630	630	630	630	1035	1035	1035	1035	1035	1350	1665	2070	2070	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA
32	180	720	720	720	720	1170	1170	1170	1170	1170	1485	1845	2250	2250	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA
33	180	720	720	720	720	1170	1170	1170	1170	1170	1485	1845	2250	2250	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA
34	180	720	720	720	720	1170	1170	1170	1170	1170	1485	1845	2250	2250	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA
35	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
37	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39	270	900	900	900	900	1440	1440	1440	1440	1440	1800	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
40	270	900	900	900	900	1440	1440	1440	1440	1440	1800	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
41	270	900	900	900	900	1440	1440	1440	1440	1440	1800	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
42	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
43	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
44	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
45	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	360	1080	1080	1080	1080	1665	1665	1665	1665	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	360	1080	1080	1080	1080	1665	1665	1665	1665	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

Application Method 7

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Shank Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

DPR recommends prohibiting metam sodium and metam potassium shank applications with no post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment") made. In contrast, for applications with 1, 2, or 3 post-application water treatments, use the buffer zone tables within these recommended permit conditions. The buffer zone tables attached to this document have been developed for each product, and are arranged by the percentage of active ingredient. Additional restrictions may apply for fields located within California's nonattainment areas.

To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Shank Applications,
Continued

Restrictions near Schools, Day care centers, and Preschools

1. All applications are prohibited ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. For applications made greater than ½ mile up to 1 mile from the perimeter of a school property unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of application, several restrictions apply including:
   - A minimum of three post-application water treatments, unless it meets the requirements of CAC discretion detailed under "Post-Application Water Requirements" later in these permit conditions;
   - field monitoring every hour for 12 hours following application; and
   - applications that comply with the "Application Method Requirements" and "Emergency Response Measures: Offsite Movement Suppression Requirements" as described below.

Application method requirements

1. The following requirements apply to all shank applications of metam sodium and metam potassium:
   - All application equipment must be inspected immediately prior to use to assure it is in good working condition.
   - All irrigation equipment that will be used for post-application water treatments must be inspected and tested prior to beginning the application to assure it is in good working condition.
2. Application block size cannot exceed 80 acres in a 24-hour period.

Continued on next page

Application method requirements (continued)

Table 1. Maximum Size of Application Block Treated Within 24 Hours for Shank Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Maximum Application Block Size
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	40 acres
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	80 acres

*See Appendix I for definition of "School"

Table 2. Maximum Size of Application Block Treated Within 24 Hours for Shank Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Maximum Application Block Size
¼ mile or less	40 acres
Greater than ¼ mile	80 acres

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Offsite movement suppression requirements: emergency response measures

For all shank applications, the certified applicator supervising the application must verify that the operator of the property to be fumigated has the capability to respond to offsite movement of MITC. The specific capability required is shown in Tables 3 and 4. The supervising certified applicator must document that capability in the Emergency Response Plan located in the Fumigation Management Plan.

Continued on next page

Offsite movement suppression requirements: emergency response measures (continued)

Table 3. Required Capability to Suppress Offsite Movement Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.

*See Appendix I for definition of "School"

Continued on next page

Offsite movement suppression requirements: emergency response measures (continued)

Table 4. Required Capability to Suppress Offsite Movement Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Irrigation equipment and water available for 48 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than ¼ mile up to 1 mile	Irrigation equipment and water available for 24 hours post-application Exception: May substitute 3-inch soil cap if: 1. Water is not available, and 2. Application is bedded or strip.
Greater than 1 mile	Not required

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Shank Applications,
Continued

Offsite movement suppression requirements: emergency response measures (continued)

1. When planning to use water to suppress offsite movement, the certified applicator supervising the application must select, and document in the Emergency Response Plan located on the Fumigation Management Plan, a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The ranges of 0.20–0.40 inches of water and 0.15–0.25 inches per hour allow the CAC to determine the amount of water required based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.
2. Follow the application site monitoring requirements under "Application Site Monitoring Requirements" detailed later in these permit conditions.
3. Whenever offsite movement of MITC is detected, cease the application (if still underway) and initiate the Emergency Response Plan indicated in the Fumigation Management Plan.
4. The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
5. Obtain authorization from the CAC prior to restarting any application that has been ceased due to a response.

Permit application

Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Shank Applications,
Continued

Notice of intent (continued)

- The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
- The method of post-application treatment to be used to suppress offsite movement, including number of post-application water treatments, if applicable.
- The buffer zone size and duration if longer than required by the label.
- The certified applicator's 24-hour contact telephone number.
- Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to Fumigation Management Plan.)
- Proof that sufficient water available for application, post-application water treatment, and offsite movement suppression requirements. (Attach proof to the Fumigation Management Plan.)
- Proof of sufficient soil if soil capping can be used in lieu of water for the offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
- Include the map required for Fumigation Management Plan in the NOI.

Application timing

1. With the exception of the nighttime application method listed below, metam sodium and metam potassium shank applications must start no earlier than 1 hour after sunrise and must be completed in time to allow post-application water treatments to begin no later than 1 hour before sunset.
2. Allowed nighttime application method (see specific requirements below for this application method):
   - Shank applications beginning no earlier than 1 a.m. (broadcast or bed).
     - In addition to the requirements listed above, the following specific requirements apply to metam sodium and metam potassium shank applications beginning no earlier than 1 a.m.
       - This application method is allowed year round.

Continued on next page

Application timing
(continued)

- Before application, thoroughly cultivate the field with a disc or spring tooth bar to remove clods.
- The application equipment must meet the following specific criteria:
  - The shanks must be set on three bars spaced 12–16 inches apart from front to back.
  - The shanks must be staggered on each tool bar to produce a final overall shank spacing of 9–11 inches.
  - Injection depth on each shank must be 3–4 inches, 6–7 inches, and 9–10 inches.
  - Anytime the shanks are lifted from the ground, nitrogen must be used to purge the system before the application bar is lifted out of the ground

o Compaction equipment must meet one of the following criteria:
- The application tool bars must be followed by a ring roller that is at least as wide as the application tool bars, with 4-gauge wheels controlled by hydraulic cylinders to control depth and/or pressure, OR
- The application tool bars must be followed with a coil packer that is at least as wide as the application tool bars.

o A minimum of two post-application water treatments must be applied.

o Post-application water treatment must be underway by sunrise.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Shank Applications,
Continued

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone tables on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium shank injection applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium shank injection applications require a minimum buffer zone of 90 feet.
     iii. Use buffer zone tables 1 through 9 as appropriate based on the product and number of post-application water treatments to determine the buffer zone distance.
     iv. If the tables do not capture the specific acreage or application rate, round up to the nearest acre or rate.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If a written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.

Continued on next page

Application site monitoring requirements (continued)

- Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
- Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
    - Monitoring must be done at the outer edge of the buffer zone.
    - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
    - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
    - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).

2. Pre-Application
    - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.
3. During Application
    - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
        - Wind speed and wind direction; and
        - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms exposure, equipment failure, or spill).
4. Post-application
    - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.

Continued on next page

Application site monitoring requirements (continued)

- Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 5 and 6:

Table 5. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every hour

*See Appendix I for definition of "School"

Table 6. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Post-application watering information (see "Post-Application Water Treatments (Field Fumigation) form DPR-ENF-225"). Record start and stop times for water treatments, as well as total inches applied.
- Any unusual conditions observed at the application site (e.g., dry soil conditions, odor or irrigation equipment failure, or spill).

Continued on next page

Post-application water treatments

1. Post-application water treatments are required and must be recorded on the "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225" or equivalent form and attached to the Post-Application Summary.
2. Water can be applied at any time in response to odor or illness.
3. For each post-application water treatment discussed below, the certified applicator supervising the application must ensure a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The 0.20–0.40 inch range allows the CAC to determine the amount of water required, based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.

4. For 1 a.m. start shank, a minimum of two post-application water treatments are required.

Table 7. Post-Application Water Treatments Required for Shank Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Minimum of 3 water treatments (CAC discretion to reduce to 2)
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	Minimum of 2 water treatments (CAC discretion to reduce to 1)

*See Appendix I for definition of "School"

Continued on next page

Post-application water treatments (continued)

Table 8. Post-Application Water Treatments Required for Shank Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Minimum of 3 water treatments (CAC discretion to reduce to 2)
Greater than ¼ mile	Minimum of 2 water treatments (CAC discretion to reduce to 1)

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Use the following timing for whichever post-application water treatments are applied:

- Post-application water 1 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, starting within 30 minutes of completion of the application.
- Post-application water 2 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the same day of application, beginning no earlier than 1 hour before sunset and completing by midnight.
- Post-application water 3 (Day 2)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the day following the application, beginning no earlier than 1 hour before sunset and completing by midnight.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Shank Applications,
Continued

Post-application water treatments (continued)

1. Exceptions to Metam Sodium/Metam Potassium Post-Application Water Treatment Requirements:
   - Alternate Sealing - Post-application water treatments are not required for applications made under 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:
     i. Post-application water treatment(s) are not required following soil injection (i.e., shank) applications under the following conditions:
        a) Metam is banded using a width 14 inches or less.
        b) The maximum application rate is 90 pounds active ingredient per acre.
        c) The injection depth is 3-6 inches.
        d) 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 compacted using a mechanical device (compaction roller).
        e) Use Tables 2, 5, and 8 to determine buffer zones.
        f) The buffer zone duration is 24 hours.
     ii. The application block is tarped.
        a) The tarp must remain in place for a minimum of 48 hours.
        b) Use Tables 2, 5, and 8 to determine buffer zones.
        c) The buffer zone remains in effect until the tarp is removed.

Continued on next page

Post-application water treatments (continued)

2. CAC Discretion
   - The CAC has the option to eliminate the third post-application water treatment requirement for application blocks ¼ mile or less from an occupied structure or bystander area based on an evaluation of the soil type and moisture content, knowledge of local conditions, and effective offsite movement control measures previously used, provided that the application block is greater than ½ mile to 1 mile from the perimeter of a school property (unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application). Use the buffer zones for two post-application water treatments if the third post-application water treatment is eliminated.
   - The CAC has the option to eliminate the second post-application water treatment requirement (except for 1 a.m. start) for application blocks greater than ¼ mile from an occupied structure, or bystander area based on an evaluation of the soil type and moisture content, knowledge of local conditions, and effective offsite movement control measures previously used, provided that the application block is greater than 1 mile from the perimeter of a school property (unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application). Use buffer zones for one post-application water treatment if the second post-application water treatment is eliminated.

Buffer Zone Table 1: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Shank Applications with **Three** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
≤24	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	150	175	175	213	213	250	250
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	175	200	200	238	238	275	275
27	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	206	206	238	238	274	274	311	311
28	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	238	238	275	275	311	311	348	348
30	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	225	269	269	313	313	348	348	384	384
31	100	100	100	100	100	100	100	100	100	100	100	150	175	200	225	250	300	300	350	350	385	385	420	420
33	100	100	100	100	100	100	100	100	100	100	125	175	206	238	263	288	338	338	388	388	426	426	465	465
35	100	100	100	100	100	100	100	100	100	100	150	200	238	275	300	325	375	375	425	425	468	468	510	510
36	100	100	100	100	100	100	100	100	113	125	175	225	269	313	338	363	413	413	463	463	509	509	555	555
38	100	100	100	100	100	100	105	120	135	150	200	250	300	350	375	400	450	450	500	500	550	550	600	600
39	100	100	100	100	100	103	118	133	148	163	213	263	313	363	388	413	475	475	538	538	594	594	650	650
41	100	100	100	100	100	115	130	145	160	175	225	275	325	375	400	425	500	500	575	575	638	638	700	700
42	100	100	100	100	113	128	143	158	173	188	238	288	338	388	413	438	525	525	613	613	681	681	750	750
44	100	100	100	110	125	140	155	170	185	200	250	300	350	400	425	450	550	550	650	650	725	725	800	800
46	100	100	101	116	131	146	161	176	191	206	263	313	413	425	450	488	581	581	675	675	753	753	831	831
47	100	100	108	123	138	153	168	183	198	213	275	325	425	450	475	525	613	613	700	700	781	781	863	863
49	100	100	114	129	144	159	174	189	204	219	288	338	438	475	500	563	644	644	725	725	809	809	894	894
50	100	105	120	135	150	165	180	195	210	225	300	350	400	450	525	600	675	675	750	750	838	838	925	925
52	100	108	124	139	155	170	186	201	217	232	309	361	413	464	541	619	696	696	773	773	864	864	954	954
53	100	112	128	143	159	175	191	207	223	239	319	372	425	478	558	638	717	717	797	797	890	890	983	983
55	100	115	131	148	164	180	197	213	230	246	328	383	438	492	574	656	738	738	820	820	916	916	1012	1012
57	101	118	135	152	169	186	203	219	236	253	338	394	450	506	591	675	759	759	844	844	942	942	1041	1041
58	104	121	139	156	173	191	208	225	243	260	348	405	463	520	607	694	780	780	867	867	968	968	1070	1070
60	107	125	143	160	178	196	214	232	249	267	356	416	475	534	623	713	802	802	891	891	995	995	1098	1098

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
61	110	128	146	163	183	201	219	238	256	274	366	427	488	548	640	731	823	823	914	914	1021	1021	1127	1127
63	113	131	150	168	188	206	225	244	263	281	375	438	500	563	656	750	844	844	938	938	1047	1047	1156	1156
64	115	135	154	173	192	211	231	250	269	288	384	448	513	577	673	769	865	865	961	961	1073	1073	1185	1185
66	116	138	158	177	197	217	236	256	276	295	394	459	525	591	689	788	886	886	984	984	1099	1099	1214	1214
68	121	141	161	181	202	222	242	262	282	302	403	470	538	605	705	806	907	907	1008	1008	1125	1125	1243	1243
69	124	144	165	186	206	227	248	268	289	309	413	481	550	619	722	825	928	928	1031	1031	1152	1152	1272	1272
71	127	148	169	190	211	232	253	274	295	316	422	492	563	633	738	844	949	949	1055	1055	1178	1178	1301	1301
72	129	151	173	194	216	237	259	280	302	323	431	503	575	647	755	863	970	970	1078	1078	1204	1204	1330	1330
74	132	154	176	198	220	242	264	286	308	330	441	514	588	661	771	881	991	991	1102	1102	1230	1230	1359	1359
75	135	158	180	203	225	248	270	293	315	338	450	525	600	675	788	900	1013	1013	1125	1125	1256	1256	1388	1388

Buffer Zone Table 2: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Shank Applications with **Two** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
≤24	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	150	175	175	213	213	250	250
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	175	200	200	238	238	275	275
27	100	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	206	206	238	238	274	274	311	311
28	100	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	238	238	275	275	311	311	348	348
30	100	100	100	100	100	100	100	100	100	100	100	125	150	175	200	225	269	269	313	313	348	348	384	384
31	100	100	100	100	100	100	100	100	100	100	100	150	175	200	225	250	300	300	350	350	385	385	420	420
33	100	100	100	100	100	100	100	100	100	100	125	175	206	238	263	288	338	338	388	388	426	426	465	465
35	100	100	100	100	100	100	100	100	100	100	150	200	238	275	300	325	375	375	425	425	468	468	510	510
36	100	100	100	100	100	100	100	100	113	125	175	225	269	313	338	363	413	413	463	463	509	509	555	555
38	100	100	100	100	100	100	105	120	135	150	200	250	300	350	375	400	450	450	500	500	550	550	600	600
39	100	100	100	100	100	103	118	133	148	163	213	263	313	363	388	413	475	475	538	538	594	594	650	650
41	100	100	100	100	100	115	130	145	160	175	225	275	325	375	400	425	500	500	575	575	638	638	700	700
42	100	100	100	100	113	128	143	158	173	188	238	288	338	388	413	438	525	525	613	613	681	681	750	750
44	100	100	100	110	125	140	155	170	185	200	250	300	350	400	425	450	550	550	650	650	725	725	800	800
46	100	100	101	116	131	146	161	176	191	206	263	313	413	425	450	488	581	581	675	675	753	753	831	831
47	100	100	108	123	138	153	168	183	198	213	275	325	425	450	475	525	613	613	700	700	781	781	863	863
49	100	100	114	129	144	159	174	189	204	219	288	338	438	475	500	563	644	644	725	725	809	809	894	894
50	100	105	120	135	150	165	180	195	210	225	300	350	400	450	525	600	675	675	750	750	838	838	925	925
52	100	108	124	139	155	170	186	201	217	232	309	361	413	464	541	619	696	696	773	773	864	864	954	954
53	100	112	128	143	159	175	191	207	223	239	319	372	425	478	558	638	717	717	797	797	890	890	983	983
55	100	115	131	148	164	180	197	213	230	246	328	383	438	492	574	656	738	738	820	820	916	916	1012	1012
57	101	118	135	152	169	186	203	219	236	253	338	394	450	506	591	675	759	759	844	844	942	942	1041	1041
58	104	121	139	156	173	191	208	225	243	260	348	405	463	520	607	694	780	780	867	867	968	968	1070	1070
60	107	125	143	160	178	196	214	232	249	267	356	416	475	534	623	713	802	802	891	891	995	995	1098	1098

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
61	110	128	146	163	183	201	219	238	256	274	366	427	488	548	640	731	823	823	914	914	1021	1021	1127	1127
63	113	131	150	168	188	206	225	244	263	281	375	438	500	563	656	750	844	844	938	938	1047	1047	1156	1156
64	115	135	154	173	192	211	231	250	269	288	384	448	513	577	673	769	865	865	961	961	1073	1073	1185	1185
66	116	138	158	177	197	217	236	256	276	295	394	459	525	591	689	788	886	886	984	984	1099	1099	1214	1214
68	121	141	161	181	202	222	242	262	282	302	403	470	538	605	705	806	907	907	1008	1008	1125	1125	1243	1243
69	124	144	165	186	206	227	248	268	289	309	413	481	550	619	722	825	928	928	1031	1031	1152	1152	1272	1272
71	127	148	169	190	211	232	253	274	295	316	422	492	563	633	738	844	949	949	1055	1055	1178	1178	1301	1301
72	129	151	173	194	216	237	259	280	302	323	431	503	575	647	755	863	970	970	1078	1078	1204	1204	1330	1330
74	132	154	176	198	220	242	264	286	308	330	441	514	588	661	771	881	991	991	1102	1102	1230	1230	1359	1359
75	135	158	180	203	225	248	270	293	315	338	450	525	600	675	788	900	1013	1013	1125	1125	1256	1256	1388	1388

Buffer Zone Table 3: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Shank Applications with **One** Post-Application Water Treatments

							Acres treated																	
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
≤24	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
25	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
27	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
28	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
30	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
31	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
33	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
35	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
36	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
38	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
39	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
41	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
42	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
44	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
46	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
47	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
49	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
50	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
52	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
53	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
55	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
57	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
58	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
60	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
61	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
63	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
64	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

							Acres treated																	
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
66	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
68	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
69	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
71	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
72	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
74	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
75	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Buffer Zone Table 4: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Shank Applications with **Three** Post-Application Water Treatments

								Acres treated																
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
8	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
9	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
11	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
14	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
21	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
22	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
26	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
27	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	105	105
28	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	120	120

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
29	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	104	104	136	136
31	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	122	151	151
32	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	115	115	141	141	166	166
33	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	103	103	136	136	159	159	182	182
34	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	118	118	157	157	177	177	197	197
35	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	101	138	138	177	177	200	200	223	223
36	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	157	157	196	196	223	223	249	249
38	100	100	100	100	100	100	100	100	100	100	100	100	100	100	121	144	177	177	216	216	246	246	276	276
39	100	100	100	100	100	100	100	100	100	100	100	150	150	150	150	166	197	197	236	236	269	269	302	302
40	100	100	100	100	100	100	100	100	100	100	100	150	150	150	163	188	217	217	256	256	292	292	328	328
41	100	100	100	100	100	100	100	100	100	100	100	150	150	157	183	209	236	236	275	275	315	315	354	354
42	100	100	100	100	100	100	100	100	100	100	100	150	150	173	199	225	252	252	291	291	334	334	378	378
43	100	100	100	100	100	100	100	100	100	100	100	150	150	189	215	241	268	268	307	307	354	354	401	401
45	100	100	100	100	100	100	100	100	100	100	100	150	165	204	230	258	283	283	322	322	374	374	425	425
46	100	100	100	100	100	100	100	100	100	100	100	150	181	220	248	272	299	299	338	338	393	393	448	448
47	100	100	100	100	100	100	100	100	100	100	100	157	200	236	262	288	315	315	354	354	413	413	472	472
48	100	100	100	100	100	100	100	100	100	100	108	200	204	243	271	299	335	335	374	374	433	433	492	492
49	100	100	100	100	100	100	100	100	100	100	118	200	210	249	280	310	354	354	393	393	453	453	512	512
50	100	100	100	100	100	100	100	100	100	100	128	200	217	256	289	321	374	374	413	413	472	472	532	532
52	100	100	100	100	100	100	100	100	100	100	137	200	223	262	297	332	394	394	433	433	492	492	551	551
53	100	100	100	100	100	100	100	100	100	100	147	200	230	269	306	343	414	414	453	483	512	512	571	571
54	100	100	100	100	100	100	100	100	100	100	157	200	236	275	315	354	433	433	472	472	532	532	591	591
55	100	100	100	100	100	100	100	100	100	110	167	204	243	294	324	365	452	452	491	491	552	552	611	611
56	100	100	100	100	100	100	100	100	102	122	177	211	249	290	333	378	472	472	511	511	572	572	631	631

Buffer Zone Table 5: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Shank Applications with **Two** Post-Application Water Treatments

								Acres treated																
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
2	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
5	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
6	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
7	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
8	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
9	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
11	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
12	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
14	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
15	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
20	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
21	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
22	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
26	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
27	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	105	105
28	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	120	120

								Acres treated																
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
29	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	104	104	136	136
31	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	122	151	151
32	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	115	115	141	141	166	166
33	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	103	103	136	136	159	159	182	182
34	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	118	118	157	157	177	177	197	197
35	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	101	138	138	177	177	200	200	223	223
36	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	122	157	157	196	196	223	223	249	249
38	100	100	100	100	100	100	100	100	100	100	100	100	100	100	121	144	177	177	216	216	246	246	276	276
39	100	100	100	100	100	100	100	100	100	100	100	150	200	200	200	200	200	200	236	236	269	269	302	302
40	100	100	100	100	100	100	100	100	100	100	100	150	200	200	200	200	217	217	256	256	292	292	328	328
41	100	100	100	100	100	100	100	100	100	100	100	150	200	200	200	209	236	236	275	275	315	315	354	354
42	100	100	100	100	100	100	100	100	100	100	150	150	200	200	200	225	252	252	291	291	334	334	378	378
43	100	100	100	100	100	100	100	100	100	100	150	200	250	250	250	300	300	300	307	307	354	354	401	401
45	100	100	100	100	100	100	100	100	100	100	150	200	250	250	250	300	300	300	322	322	374	374	425	425
46	100	100	100	100	100	100	100	100	100	100	150	200	250	250	250	300	300	300	338	338	393	393	448	448
47	100	100	100	100	100	100	100	100	100	100	150	200	250	250	262	300	315	315	354	354	413	413	472	472
48	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	400	400	433	433	492	492
49	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	400	400	453	453	512	512
50	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	413	413	472	472	532	532
52	100	100	100	100	100	100	100	100	100	100	200	250	350	350	350	400	400	400	433	433	492	492	551	551
53	100	100	100	100	100	100	100	100	100	100	200	300	400	400	400	500	500	500	500	500	512	512	571	571
54	100	100	100	100	100	100	100	100	100	100	200	300	400	400	400	500	500	500	500	500	532	532	591	591
55	100	100	100	100	100	100	100	100	100	110	200	300	400	400	400	500	500	500	500	500	552	552	611	611
56	100	100	100	100	100	100	100	100	102	122	200	300	400	400	400	500	500	500	511	511	572	572	631	631

Buffer Zone Table 6: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Shank Applications with **One** Post-Application Water Treatments

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
2	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
3	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
4	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
5	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
6	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
7	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
8	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
9	100	100	100	100	100	100	100	100	100	100	100	200	200	200	200	300	500	500	500	500	500	500	500	600
11	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
12	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
13	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
14	100	100	100	100	100	200	200	200	200	200	250	400	450	450	450	600	800	800	800	800	800	800	800	900
15	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
16	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
18	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
19	100	100	100	100	100	300	300	300	300	300	400	600	700	700	700	900	1100	1100	1100	1100	1100	1100	1100	1300
20	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
21	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
22	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
23	100	250	250	250	250	500	500	500	500	500	650	850	1050	1050	1050	1300	1450	1450	1450	1450	1450	1450	1450	1750
25	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
26	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
27	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
28	100	350	350	350	350	650	650	650	650	650	850	1100	1400	1400	1400	1700	1800	1800	1800	1800	1800	1800	1800	2200
29	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
31	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
32	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
33	100	500	500	500	500	850	850	850	850	850	1100	1350	1750	1750	1750	2100	2150	2150	2150	2150	2150	2150	2150	NA
34	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
35	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
36	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
38	100	600	600	600	600	1000	1000	1000	1000	1000	1300	1600	2100	2100	2100	2500	2500	2500	2500	2500	2500	2500	2500	NA
39	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
40	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
41	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
42	150	700	700	700	700	1150	1150	1150	1150	1150	1500	1850	2300	2300	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA
43	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
45	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	200	800	800	800	800	1300	1300	1300	1300	1300	1650	2050	2500	2500	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA
48	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
49	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
50	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
52	250	900	900	900	900	1450	1450	1450	1450	1450	1850	2300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
53	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
54	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
55	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
56	300	1000	1000	1000	1000	1600	1600	1600	1600	1600	2000	2500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Buffer Zone Table 7: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Shank Applications with **Three** Post-Application Water Treatments

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
2	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
3	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
4	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
5	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
6	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
7	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
8	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
9	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
10	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
12	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
13	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
14	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
15	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
17	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
18	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
19	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
20	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
21	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
22	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	105	105
23	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	120	120
24	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	104	104	136	136
25	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	94	94	122	122	151	151
26	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	115	115	141	141	166	166

								Acres treated																
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
27	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	103	103	136	136	159	159	182	182
28	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	118	118	157	157	177	177	197	197
29	90	90	90	90	90	90	90	90	90	90	90	135	135	135	135	135	138	138	177	177	200	200	223	223
30	90	90	90	90	90	90	90	90	90	90	90	135	135	135	135	135	157	157	196	196	223	223	249	249
31	90	90	90	90	90	90	90	90	90	90	90	135	135	135	135	144	177	177	216	216	246	246	276	276
32	90	90	90	90	90	90	90	90	90	90	90	135	135	135	142	180	197	197	236	236	269	269	302	302
33	90	90	90	90	90	90	90	90	90	90	90	135	135	135	163	188	217	217	256	256	292	292	328	328
34	90	90	90	90	90	90	90	90	90	90	90	135	135	157	183	209	236	236	275	275	315	315	354	354
35	90	90	90	90	90	90	90	90	90	90	90	180	180	180	199	225	252	252	291	291	334	334	378	378
36	90	90	90	90	90	90	90	90	90	90	90	180	180	189	215	241	268	268	307	307	354	354	401	401
37	90	90	90	90	90	90	90	90	90	90	90	180	180	204	230	256	283	283	322	322	374	374	425	425
38	90	90	90	90	90	90	90	90	90	90	90	180	181	220	246	272	299	299	338	338	393	393	448	448
39	90	90	90	90	90	90	90	90	90	90	98	180	197	236	262	288	315	315	354	354	413	413	472	472
40	90	90	90	90	90	90	90	90	90	90	108	180	204	243	271	299	335	335	374	374	433	433	492	492
41	90	90	90	90	90	90	90	90	90	90	118	180	210	249	280	310	354	354	393	393	453	453	512	512
42	90	90	90	90	90	135	135	135	135	135	135	225	270	270	289	360	374	374	413	413	472	472	532	532
43	90	90	90	90	90	135	135	135	135	135	137	225	270	270	297	360	394	394	433	433	492	492	551	551
44	90	90	90	90	90	135	135	135	135	135	147	225	270	270	306	360	414	414	453	453	512	512	571	571
45	90	90	90	90	90	135	135	135	135	135	157	225	270	275	315	360	433	433	472	472	532	532	591	591
46	90	90	90	90	90	135	135	135	135	135	180	270	315	315	324	405	452	452	491	491	552	552	611	611
47	90	90	90	90	90	135	135	135	135	135	180	270	315	315	333	405	472	472	511	511	572	572	631	631

Buffer Zone Table 8: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Shank Applications with **Two** Post-Application Water Treatments

	Acres treated																							
gal/A	1	2	3	4	5	6	7	8	9	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
1	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
2	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
3	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
4	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
5	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
6	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
7	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
8	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
9	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
10	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
12	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
13	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
14	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
15	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
17	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
18	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
19	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
20	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
21	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
22	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	105	105
23	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	120	120
24	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	104	104	136	136
25	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	94	94	122	122	151	151
26	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	115	115	141	141	166	166

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
27	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	103	103	136	136	159	159	182	182
28	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	118	118	157	157	177	177	197	197
29	90	90	90	90	90	90	90	90	90	90	135	135	180	180	180	180	180	180	180	180	200	200	223	223
30	90	90	90	90	90	90	90	90	90	90	135	135	180	180	180	180	180	180	196	196	223	223	249	249
31	90	90	90	90	90	90	90	90	90	90	135	135	180	180	180	180	180	180	216	216	246	246	276	276
32	90	90	90	90	90	90	90	90	90	90	135	180	225	225	225	270	270	270	270	270	270	270	302	302
33	90	90	90	90	90	90	90	90	90	90	135	180	225	225	225	270	270	270	270	270	292	292	328	328
34	90	90	90	90	90	90	90	90	90	90	135	180	225	225	225	270	270	270	275	275	315	315	354	354
35	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	360	360	378	378
36	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	360	360	401	401
37	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	374	374	425	425
38	90	90	90	90	90	90	90	90	90	90	180	225	315	315	315	360	360	360	360	360	393	393	448	448
39	90	90	90	90	90	90	90	90	90	90	180	270	360	360	360	450	450	450	450	450	450	450	472	472
40	90	90	90	90	90	90	90	90	90	90	180	270	360	360	360	450	450	450	450	450	450	450	492	492
41	90	90	90	90	90	90	90	90	90	90	180	270	360	360	360	450	450	450	450	450	453	453	512	512
42	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	585	585
43	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	585	585
44	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	585	585
45	90	90	90	90	90	135	135	135	135	135	225	315	450	450	450	540	540	540	585	585	585	585	591	591
46	90	90	90	90	90	180	180	180	180	180	270	360	495	495	495	630	630	630	675	675	675	675	675	675
47	90	90	90	90	90	180	180	180	180	180	270	360	495	495	495	630	630	630	675	675	675	675	675	675

Buffer Zone Table 9: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Shank Applications with **One** Post-Application Water Treatments

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
1	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
2	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
3	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
4	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
5	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
6	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
7	90	90	90	90	90	90	90	90	90	90	90	180	180	180	180	270	450	450	450	450	450	450	450	540
8	90	90	90	90	90	180	180	180	180	180	225	360	405	405	405	540	720	720	720	720	720	720	720	810
9	90	90	90	90	90	180	180	180	180	180	225	360	405	405	405	540	720	720	720	720	720	720	720	810
10	90	90	90	90	90	180	180	180	180	180	225	360	405	405	405	540	720	720	720	720	720	720	720	810
11	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
12	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
13	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
14	90	90	90	90	90	270	270	270	270	270	360	540	630	630	630	810	990	990	990	990	990	990	990	1170
15	90	225	225	225	225	450	450	450	450	450	585	765	945	945	945	1170	1305	1305	1305	1305	1305	1305	1305	1575
16	90	225	225	225	225	450	450	450	450	450	585	765	945	945	945	1170	1305	1305	1305	1305	1305	1305	1305	1575
17	90	225	225	225	225	450	450	450	450	450	585	765	945	945	945	1170	1305	1305	1305	1305	1305	1305	1305	1575
18	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
19	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
20	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
21	90	315	315	315	315	585	585	585	585	585	765	990	1260	1260	1260	1530	1620	1620	1620	1620	1620	1620	1620	1980
22	90	450	450	450	450	765	765	765	765	765	990	1215	1575	1575	1575	1890	1935	1935	1935	1935	1935	1935	1935	NA
23	90	450	450	450	450	765	765	765	765	765	990	1215	1575	1575	1575	1890	1935	1935	1935	1935	1935	1935	1935	NA
24	90	450	450	450	450	765	765	765	765	765	990	1215	1575	1575	1575	1890	1935	1935	1935	1935	1935	1935	1935	NA
25	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA
26	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA

	Acres treated																							
gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**15**	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**	**80**
27	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA
28	90	540	540	540	540	900	900	900	900	900	1170	1440	1890	1890	1890	2250	2250	2250	2250	2250	2250	2250	2250	NA
29	135	630	630	630	630	1035	1035	1035	1035	1035	1350	1665	2070	2070	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA
30	135	630	630	630	630	1035	1035	1035	1035	1035	1350	1665	2070	2070	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA
31	135	630	630	630	630	1035	1035	1035	1035	1035	1350	1665	2070	2070	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA
32	180	720	720	720	720	1170	1170	1170	1170	1170	1485	1845	2250	2250	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA
33	180	720	720	720	720	1170	1170	1170	1170	1170	1485	1845	2250	2250	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA
34	180	720	720	720	720	1170	1170	1170	1170	1170	1485	1845	2250	2250	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA
35	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
36	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
37	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38	225	810	810	810	810	1305	1305	1305	1305	1305	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
39	270	900	900	900	900	1440	1440	1440	1440	1440	1800	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
40	270	900	900	900	900	1440	1440	1440	1440	1440	1800	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
41	270	900	900	900	900	1440	1440	1440	1440	1440	1800	2250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
42	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
43	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
44	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
45	315	990	990	990	990	1575	1575	1575	1575	1575	1935	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
46	360	1080	1080	1080	1080	1665	1665	1665	1665	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47	360	1080	1080	1080	1080	1665	1665	1665	1665	1665	2070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

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Application Method 8

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Spray Blade with Soil Cap Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Spray Blade with Soil Cap Applications, Continued

Restrictions near Schools, Day care centers, and Preschools

1. When made to more than 5 acres, applications are prohibited when ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. When made to 5 acres or less, applications are prohibited when ¼ mile or less from the perimeter of a school property unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.

Specific application requirements

The following requirements apply to all spray blade applications of metam sodium and metam potassium:

1. All application equipment must be inspected immediately prior to beginning the application to assure it is in good working condition.
2. The treated area must be covered with 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.

Permit applications

Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Spray Blade with Soil Cap Applications, Continued

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.
   - The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
   - The buffer zone size and buffer zone duration if longer than required by the label.
   - The certified applicator's 24-hour contact telephone number.
   - Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of the application block, if applicable. (Attach these agreements to the Fumigation Management Plan.)
   - Include the map required for the Fumigation Management Plan in the NOI.

Application timing

Metam sodium and metam potassium spray blade with soil cap applications must start no earlier than 1 hour after sunrise and must be completed no later than 1 hour before sunset.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Spray Blade with Soil Cap Applications, Continued

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use the buffer zone table on the label to determine the buffer zone distance incorporating the following restrictions:
     i. All metam sodium spray blade injection applications require a minimum buffer zone of 100 feet.
     ii. All metam potassium spray blade injection applications require a minimum buffer zone of 90 feet.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If the written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Spray Blade with Soil Cap Applications, Continued

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.
   - If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
   - Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
   - Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
     - Monitoring must be done at the outer edge of the buffer zone.
     - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
     - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
     - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds).
   - The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
2. Pre-Application
   - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.

Continued on next page

Application site monitoring requirements (continued)

3. During Application
   - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
     - Wind speed and wind direction; and
     - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms exposure, equipment failure, or spill).
4. Post-application
   - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
   - Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 1 and 2.

Table 1. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session **(application block size must be 5 acres or less)**	Every hour
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every 2 hours

*See Appendix I for definition of "School"

Continued on next page

Application site monitoring requirements (continued)

Table 2. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:

- Wind speed and direction at the application site.
- Air temperature at the application site.
- Any unusual conditions observed at the application site (e.g., dry soil conditions, odor, irrigation equipment failure, or spill).
- Monitoring must be done in all directions on calm days.

Post-application water treatments

Post-application water is not required for spray blade applications because a 6-inch soil cap must be used. However, the operator of the property should have sufficient water or untreated soil available and have the means to apply them at any time in response to odor or illness.

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil-compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.

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Application Method 9

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Sprinkler Applications

Scope

In addition to labeling and regulations, DPR recommends the following permit conditions. These permit conditions were developed to mitigate hazards of offsite movement of methyl isothiocyanate (MITC) following applications of metam sodium, metam potassium, and dazomet. DPR risk assessment and incident reports identified excess risk to field workers and bystanders near applications of these fumigants.

DPR recommends prohibiting metam sodium and metam potassium sprinkler applications with no post-application water treatments (see Appendix I for definition of "Post-Application Water Treatment") made. In contrast, for applications with 1, 2, or 3 post-application water treatments, use the buffer zone tables 1 through 12 within these recommended permit conditions. The buffer zone tables attached to this document have been developed for each product, and are arranged by the percentage of active ingredient.

Additional restrictions may apply for fields located within California's nonattainment areas. To determine if a field is within a nonattainment area, go to www.cdpr.ca.gov and click on "A-Z Index" then "Nonattainment area maps." Additional restrictions for nonattainment areas are listed in the volatile organic compound regulations in Title 3, California Code of Regulations (3 CCR) sections 6450 through 6450.2.

CAC discretion

1. Follow the most restrictive requirement, whether it is the label, regulations, or local CAC's adopted permit conditions. DPR may provide specific guidance about exceptions.
2. The CACs have the discretion to use mitigating conditions based on the local use conditions that have worked for them in the past.
3. These recommended permit conditions are based on the fairly limited data that DPR has available. This data does not cover all environmental conditions, climates, soil types, etc.

Emergency response plan

The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.

Continued on next page

Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Sprinkler Applications,
Continued

Restrictions near Schools, Day care centers, and Preschools

1. All applications are prohibited ½ mile or less from the perimeter of a school property (see Appendix I for definition of "School") unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of the application.
2. For applications made greater than ½ mile up to 1 mile from the perimeter of a school property unless the school is not scheduled to be in session during both the application and the 36-hour period following the end of application, several restrictions apply including:
   - A minimum of three post-application water treatments, unless it meets the requirements of CAC discretion detailed under "Post-Application Water Requirements" later in these permit conditions;
   - field monitoring every hour for 12 hours following application; and
   - applications that comply with the "Application Method Requirements" and "Emergency Response Measures: Offsite Movement Suppression Requirements" as described below.

Application method requirements

Two types of sprinkler applications are allowed:
1. Daytime applications, and
2. 4 a.m. start nighttime applications.

The following requirements apply to <u>all</u> sprinkler applications of metam sodium and metam potassium:

- All application equipment must be inspected immediately prior to use to assure it is in good working condition.
- All irrigation equipment that will be used for post-application water treatments must be inspected and tested prior to beginning the application to assure it is in good working condition.
- The permittee or permittee's authorized representative, who is knowledgeable of the irrigation system, must be present at the treatment site during the application and must be trained as a pesticide handler. Employees must be trained pesticide handlers.

Continued on next page

Application method requirements (continued)

1. Daytime applications
   In addition to the requirements for <u>all</u> applications, for daytime applications the application block size cannot exceed 50 acres treated within 24 hours. Use Tables 1 and 2 to determine the maximum block size for daytime applications.

Table 1. Maximum Size of Application Block Treated Within 24 Hours for Daytime Sprinkler Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Maximum Application Block Size
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	25 acres
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of the application	50 acres

*See Appendix I for definition of "School"

Table 2. Maximum Size of Application Block Treated Within 24 Hours for Daytime Sprinkler Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Maximum Application Block Size
¼ mile or less	25 acres
Greater than ¼ mile	50 acres

*See Appendix I for definitions of "Occupied Structure" and "Bystander Areas"

Continued on next page

Application method requirements (continued)

2. 4 a.m. start nighttime applications
   In addition to the requirements for <u>all</u> applications, nighttime applications must meet the following conditions:
   - Start no earlier than 4 a.m.
   - Application block size cannot exceed 25 acres treated within a 24-hour period.
   - The metam sodium or metam potassium application must be metered evenly over a six-hour application period.
   - A minimum of two post-application water treatments must be applied.

   This method is allowed year round. However, in the San Joaquin Valley, Southeast Desert, or Ventura ozone nonattainment areas between May 1 and October 31, 4 a.m. start applications must be made at the reduced rates listed below:
   i. The metam sodium application rate must not exceed 260 pounds active ingredient per acre (lbs ai/A).
   ii. The metam potassium application rate must not exceed 290 lbs ai/A.

Offsite movement suppression requirements: emergency response measures

For all sprinkler applications, the certified applicator supervising the application must verify that the operator of the property to be fumigated has the capability to respond to offsite movement of MITC. The specific capability required is shown in Tables 3 and 4. The supervising certified applicator must document that capability in the Emergency Response Plan located in the Fumigation Management Plan.

Table 3. Required Capability to Suppress Offsite Movement Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Irrigation equipment and water available for 48 hours post-application

*See Appendix I for definition of "School"

Continued on next page

Offsite movement suppression requirements: emergency response measures (continued)

Table 4. Required Capability to Suppress Offsite Movement Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Irrigation equipment and water available for 48 hours post-application
Greater than ¼ mile up to 1 mile	Irrigation equipment and water available for 24 hours post-application
Greater than 1 mile	Exempt (not required)

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

1. When planning to use water to suppress offsite movement, the certified applicator supervising the application must select, and document in the Emergency Response Plan located in the Fumigation Management Plan, a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The ranges of 0.20–0.40 inches of water and 0.15–0.25 inches per hour allow the CAC to determine the amount of water required based on local conditions such as soil type and moisture content, and air and soil temperature at the time of application.
2. Follow the application site monitoring requirements under "Application Site Monitoring Requirements" detailed later in these permit conditions.
3. Whenever offsite movement of MITC is detected, cease the application (if still underway) and initiate the Emergency Response Plan indicated in the Fumigation Management Plan.
4. The county agricultural commissioner must be notified immediately if the emergency response plan is implemented.
5. Obtain authorization from the CAC prior to restarting any application that has been ceased due to a response.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Sprinkler Applications,
Continued

Permit application

Permit applications must include a map of all "occupied structures" and "bystander areas" (see Appendix I for definitions of "Occupied Structure" and "Bystander Area") within ½ mile of the fumigation site and all schools within 1 mile of the fumigation site.

Notice of intent

1. The Notice of Intent (NOI) is required to be submitted at least 48 hours prior to the start of fumigation.
2. In addition to information required in 3 CCR section 6434(b), the following information must be submitted with the NOI:
   - The number of application blocks to be treated and acreage of each application block.
   - The time (within a 12-hour window) that each application is scheduled to commence. If the application fails to commence within the 12-hour window, a new NOI is required, but another 48-hour waiting period would not be needed unless required by the CAC.
   - The method of post-application treatment to be used to suppress offsite movement, including number of post-application water treatments, if applicable.
   - The buffer zone size and buffer zone duration if longer than required by the label.
   - The certified applicator's 24-hour contact telephone number.
   - Written agreement(s) required by labeling to allow the buffer zone to extend onto any areas not under the control of the owner of application block, if applicable. (Attach these agreements to the Fumigation Management Plan.)
   - Proof that sufficient water is available for application, post-application water treatment, and offsite movement suppression requirements. (Also attach to Fumigation Management Plan.)
   - Include the map required for the Fumigation Management Plan in the NOI.

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Sprinkler Applications,
Continued

Application timing

1. Daytime sprinkler applications of metam sodium and metam potassium must start no earlier than 1 hour after sunrise and must be completed in time to allow post-application water treatments to begin no later than 1 hour before sunset.
2. 4 a.m. start nighttime applications of metam sodium and metam potassium must start no earlier than 4 a.m. and must be completed in time to allow post-application water treatments to begin no earlier than 1 hour before sunrise.

Buffer zones

1. Label buffer zone credits are not allowed.
2. Tables
   - Use buffer zone tables 1 through 12 as appropriate based on the product and the number of post-application water treatments to determine the buffer zone distance. DPR recommends prohibiting metam sodium and metam potassium sprinkler applications with no post-application water treatments made.
   - If the tables do not capture the specific acreage or application rate, round up to the nearest acre or rate.
3. Permission for adjoining properties
   - When the buffer zone of an application block extends onto an area not under the control of the owner of the application block, a written agreement must be submitted with the NOI and attached to the Fumigation Management Plan.
   - If a written agreement is not included in the NOI, the buffer zone cannot encroach beyond the property line of such areas (residential areas, occupied structures, publicly owned parks, etc., as described on the product label).

Application site monitoring requirements

1. General Requirements
   - Monitoring information must be recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form and attached to the Post-Application Summary.

Continued on next page

Application site monitoring requirements (continued)

- If monitoring indicates a change that could result in offsite movement (e.g., increased or greatly decreased wind speed, change in wind direction toward occupied structures) the certified applicator supervising the application must be ready to carry out the requirements described in the Emergency Response Plan located in the Fumigation Management Plan.
- Application site monitoring as described in this permit condition is separate from the "Fumigant Site Monitoring" option of the "Emergency Preparedness and Response Measures" specified on the label, and must be conducted for each application.
- Whenever "Emergency Preparedness and Response Measures" are triggered, and the "Fumigant Site Monitoring" option is selected, the supervising certified applicator must ensure that the monitoring is conducted as follows:
    - Monitoring must be done at the outer edge of the buffer zone.
    - Monitoring must be done in the direction of bystanders, residences, and businesses, and in the direction that the wind is blowing.
    - Monitoring must be done in all directions on calm days (see Appendix I for definition of "Calm Day").
    - Person monitoring must have full olfactory capabilities (e.g., not impaired by allergies or colds)

2. Pre-Application
    - Monitor and document wind speed and direction, and soil and air temperature at the application site immediately prior to application.
3. During Application
    - The following conditions must be monitored every hour until the application is completed, recorded on the form "Monitoring During Application (Field Fumigation) DPR-ENF-223" or an equivalent form during the application, and attached to the Post-Application Summary:
        - Wind speed and wind direction; and
        - Any unusual conditions observed at or adjacent to the application site (e.g., odor, reported symptoms of exposure, equipment failure, or spill).

Continued on next page

Application site monitoring requirements (continued)

4. Post-application
   - On the day of application, the certified applicator supervising the application must ensure that a trained handler is 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 the trained handler is an employee, he or she must have the authority to initiate the Emergency Response Plan whenever needed, or must be able to immediately contact the person who has that authority.
   - Post-application field monitoring shall be conducted for 12 hours following application and recorded on "Monitoring Post-Application DPR-ENF-224" or an equivalent form and attached to the Post-Application Summary. Specific monitoring requirements are shown in Tables 5 and 6:

Table 5. Frequency of Post-Application Monitoring Required Near "Schools"

Distance to Perimeter of Nearest School* Property	Monitoring Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Every hour

*See Appendix I for definition of "School"

Table 6. Frequency of Post-Application Monitoring Required Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Monitoring Requirements
¼ mile or less	Every hour
Greater than ¼ mile	Every 2 hours

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

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Metam Sodium and Metam Potassium Field Soil Fumigation Recommended Permit Conditions for Sprinkler Applications,
Continued

Application site monitoring requirements (continued)

- Each time post-application monitoring is conducted, the following conditions must be monitored and recorded:
  - Wind speed and direction at the application site.
  - Air temperature at the application site.
  - Post-application watering information (see "Post-Application Water Treatments (Field Fumigation) form DPR-ENF-225"). Record start and stop times for water treatments, as well as total inches applied.
  - Any unusual conditions observed at the application site (e.g., dry soil conditions, odor, irrigation equipment failure, or spill).
  - Monitoring must be done in all directions on calm days.

Post-application water treatments

1. Post-application water treatments are required and must be recorded on the "Post-Application Water Treatments (Field Fumigation) DPR-ENF-225" or equivalent form and attached to the Post-Application Summary.
2. Water can be applied at any time in response to odor or illness.
3. For each post-application water treatment discussed below, the certified applicator supervising the application must ensure a combination of water quantity, irrigation rate, and duration that meets all three of the following specifications:
   - total quantity of 0.20–0.40 inches of water over the treatment site,
   - irrigation delivery rate of 0.15–0.25 inches per hour, and
   - irrigation duration of 2–3 hours.

   The 0.20–0.40 inch range allows the CAC to determine the amount of water required, based on local conditions such as soil type and soil moisture content, and air and soil temperature at the time of application.

   All 4 a.m. start nighttime applications require a minimum of two post-application water treatments. For daytime applications, minimum requirements are shown in Tables 7 and 8:

Continued on next page

Post-application water treatments (continued)

Table 7. Post-Application Water Treatments Required for Daytime Sprinkler Applications Near "Schools"

Distance to Perimeter of Nearest School* Property	Water Treatment Requirements
½ mile or less and school is scheduled to be in session	Application prohibited
Greater than ½ mile and up to 1 mile, and school is scheduled to be in session	Minimum of 3 water treatments (CAC discretion to reduce to 2)
Greater than 1 mile, or school is not scheduled to be in session during both the application and the 36-hour period following the end of application	Minimum of 2 water treatments (CAC discretion to reduce to 1)

*See Appendix I for definition of "School"

Table 8. Post-Application Water Treatments Required for Daytime Sprinkler Applications Near "Occupied Structures" or "Bystander Areas"

Distance to Perimeter of Nearest Occupied Structure or Bystander Area*	Water Treatment Requirements
¼ mile or less	Minimum of 3 water treatments (CAC discretion to reduce to 2)
Greater than ¼ mile	Minimum of 2 water treatments (CAC discretion to reduce to 1)

*See Appendix I for definitions of "Occupied Structure" and "Bystander Area"

Continued on next page

Post-application water treatments (continued)

4. Use the following timing for whichever post-application water treatments are applied:
   - Post-application water 1 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, starting within 30 minutes of completion of the application.
   - Post-application water 2 (Day 1)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the same day of application, beginning no earlier than 1 hour before sunset and completing by midnight.
   - Post-application water 3 (Day 2)—Apply a minimum of 0.20–0.40 inches of water to the application block, at a rate of 0.15–0.25 inches per hour, on the day following the application, beginning no earlier than 1 hour before sunset and completing by midnight.
5. CAC Discretion
   - The CAC has the option to eliminate the third post-application water treatment requirement for application blocks **¼ mile or less** from an occupied structure or bystander area based on an evaluation of the soil type and moisture content, knowledge of local conditions, and effective offsite-movement control measures previously used, provided that the application block is **greater than ½ mile and up to 1 mile** from the perimeter of school property (unless the school is **not** scheduled to be in session during application and the 36-hour period following the end of the application). Use the buffer zones for two post-application water treatments if the third post-application water treatment is eliminated.
   - The CAC has the option to eliminate the second post-application water treatment requirement (except for 4 a.m. start applications) for application blocks **greater than ¼ mile** from an occupied structure, or bystander area based on an evaluation of the soil type and moisture content, knowledge of local conditions, and effective offsite-movement control measures previously used, provided that the application block is **greater than 1** mile from the perimeter of a school property (unless the school is **not** scheduled to be in session during both the application and the 36-hour period following the end of the application). Use buffer zones for one post-application water treatment if the second post-application water treatment is eliminated.

Buffer Zone Table 1: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Sprinkler Applications with **Three** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤10	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100
31	100	100	100	100	100	100	100	100	100	100	107	125	163	182
38	100	100	100	100	100	100	100	100	105	113	138	175	225	263
44	100	100	100	100	100	100	106	114	123	132	169	225	288	344
50	100	100	100	100	100	110	120	130	140	150	200	275	350	425
57	100	100	100	105	113	125	138	150	163	175	250	357	438	519
63	100	100	106	116	125	131	140	146	155	200	300	438	525	613
69	100	104	116	127	138	155	173	190	208	225	350	519	613	707
75	100	113	125	138	150	170	190	210	230	250	400	600	700	800
82	115	138	150	163	175	205	235	265	283	288	450	650	775	900
88	125	138	150	163	175	205	235	265	295	325	500	700	850	1000
94	137	150	163	175	188	223	258	293	328	363	550	750	925	1100
101	150	163	175	188	200	240	280	320	360	400	600	800	1000	1200

Buffer Zone Table 2: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Sprinkler Applications with **Two** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤10	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100	100	100
31	100	100	100	100	100	100	100	100	100	100	200	200	200	200
38	100	100	100	100	100	100	100	100	105	113	250	250	300	300
44	100	100	100	100	100	100	106	114	123	132	350	350	400	400
50	100	100	100	100	100	110	120	130	140	150	400	400	500	500
57	100	100	100	105	113	125	138	150	163	200	500	550	650	650
63	100	100	106	116	150	250	250	250	250	250	550	650	800	800
69	100	104	116	127	200	350	350	350	350	350	650	800	950	950
75	100	113	125	138	200	400	400	400	400	400	700	900	1100	1100
82	115	138	150	163	250	500	500	500	500	500	800	1050	1300	1300
88	125	138	150	163	300	550	550	550	550	550	900	1200	1450	1450
94	137	150	163	175	350	650	650	650	650	650	1000	1350	1650	1650
101	150	163	175	188	400	700	700	700	700	700	1100	1500	1800	1800

Buffer Zone Table 3: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Sprinkler Applications with **One** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤10	100	100	100	100	100	200	200	200	200	200	300	600	800	1000
18	100	200	200	200	200	300	300	300	300	300	500	900	1100	1300
25	100	300	300	300	300	500	500	500	500	500	900	1100	1400	1600
31	150	450	450	450	450	750	750	750	750	750	1200	1500	1800	1950
38	150	600	600	600	600	950	950	950	950	950	1550	1850	2200	2300
44	200	750	750	750	750	1150	1150	1150	1150	1150	1850	2250	NA	NA
50	200	900	900	900	900	1400	1400	1400	1400	1400	2200	NA	NA	NA
57	300	1050	1050	1050	1050	1600	1600	1600	1600	1600	NA	NA	NA	NA
63	350	1150	1150	1150	1150	1800	1800	1800	1800	1800	NA	NA	NA	NA
69	400	1250	1250	1250	1250	2000	2000	2000	2000	2000	NA	NA	NA	NA
75	500	1400	1400	1400	1400	2200	2200	2200	2200	2200	NA	NA	NA	NA
82	550	1500	1500	1500	1500	2300	2300	2300	2300	2300	NA	NA	NA	NA
88	600	1650	1650	1650	1650	2400	2400	2400	2400	2400	NA	NA	NA	NA
94	650	1800	1800	1800	1800	2500	2500	2500	2500	2500	NA	NA	NA	NA
101	700	1900	1900	1900	1900	NA	NA	NA	NA	NA	NA	NA	NA	NA

Buffer Zone Table 4: AMVAC Metam, Metam Sodium, and Vapam (32.7% metam sodium)
Buffer Zone Values for Sprinkler Applications with **4 a.m Start**

	Application Block Size (acres)											
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**25**
≤10	100	100	100	100	100	100	100	100	100	100	100	100
18	100	100	100	100	100	100	100	100	100	100	100	100
25	100	100	100	100	100	100	100	100	100	100	100	100
31	100	100	100	100	100	100	100	100	100	100	200	200
38	100	100	100	100	100	100	100	100	105	113	250	250
44	100	100	100	100	100	100	106	114	123	132	350	350
50	100	100	100	100	100	110	120	130	140	150	400	400
57	100	150	150	150	150	200	200	200	200	200	500	550
63	100	150	150	150	150	250	250	250	250	250	550	650
69	100	200	200	200	200	350	350	350	350	350	650	800
75	100	200	200	200	200	400	400	400	400	400	700	900
82	115	250	250	250	250	500	500	500	500	500	800	1050
88	125	300	300	300	300	550	550	550	550	550	900	1200
94	137	350	350	350	350	650	650	650	650	650	1000	1350
101	150	400	400	400	400	700	700	700	700	700	1100	1500

Buffer Zone Table 5: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Sprinkler Applications with **Three** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤8	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	107	125	163	182
28	100	100	100	100	100	100	100	100	105	113	138	175	225	263
33	100	100	100	100	100	100	106	114	123	132	169	225	288	344
38	100	100	100	100	100	110	120	130	140	150	200	275	350	425
42	100	100	100	105	113	125	138	150	163	175	250	357	438	519
47	100	100	106	116	125	131	140	150	163	200	300	438	525	613
52	100	104	116	127	138	155	173	190	208	225	350	519	613	707
56	100	113	125	138	150	170	190	210	230	250	400	600	700	800
61	115	152	189	226	263	268	273	278	283	288	450	650	775	900
66	125	152	189	226	263	268	273	278	295	325	500	700	850	1000
70	137	152	189	226	263	268	273	293	328	363	550	750	925	1100
75	150	163	189	226	263	268	280	320	360	400	600	800	1000	1200

Buffer Zone Table 6: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Sprinkler Applications with **Two** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤8	100	100	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	200	200	200	200
28	100	100	100	100	100	100	100	100	105	113	250	250	300	300
33	100	100	100	100	100	100	106	114	123	132	350	350	400	400
38	100	100	100	100	100	110	120	130	140	150	400	400	500	500
42	100	150	150	150	150	200	200	200	200	200	500	550	650	650
47	100	150	150	150	150	250	250	250	250	250	550	650	800	800
52	100	200	200	200	200	350	350	350	350	350	650	800	950	950
56	100	200	200	200	200	400	400	400	400	400	700	900	1100	1100
61	115	250	250	250	250	500	500	500	500	500	800	1050	1300	1300
66	125	300	300	300	300	550	550	550	550	550	900	1200	1450	1450
70	137	350	350	350	350	650	650	650	650	650	1000	1350	1650	1650
75	150	400	400	400	400	700	700	700	700	700	1100	1500	1800	1800

Buffer Zone Table 7: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Sprinkler Applications with **One** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤8	100	100	100	100	100	200	200	200	200	200	300	600	800	1000
13	100	200	200	200	200	300	300	300	300	300	500	900	1100	1300
19	100	300	300	300	300	500	500	500	500	500	900	1100	1400	1600
23	150	450	450	450	450	750	750	750	750	750	1200	1500	1800	1950
28	150	600	600	600	600	950	950	950	950	950	1550	1850	2200	2300
33	200	750	750	750	750	1150	1150	1150	1150	1150	1850	2250	NA	NA
38	200	900	900	900	900	1400	1400	1400	1400	1400	2200	NA	NA	NA
42	300	1050	1050	1050	1050	1600	1600	1600	1600	1600	NA	NA	NA	NA
47	350	1150	1150	1150	1150	1800	1800	1800	1800	1800	NA	NA	NA	NA
52	400	1250	1250	1250	1250	2000	2000	2000	2000	2000	NA	NA	NA	NA
56	500	1400	1400	1400	1400	2200	2200	2200	2200	2200	NA	NA	NA	NA
61	550	1500	1500	1500	1500	2300	2300	2300	2300	2300	NA	NA	NA	NA
66	600	1650	1650	1650	1650	2400	2400	2400	2400	2400	NA	NA	NA	NA
70	650	1800	1800	1800	1800	2500	2500	2500	2500	2500	NA	NA	NA	NA
75	700	1900	1900	1900	1900	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Buffer Zone Table 8: Metam CLR, Metam 426, Sectagon 42, and Vapam HL (42% metam sodium)
Buffer Zone Values for Sprinkler Applications with **4 a.m Start**

	Application Block Size (acres)											
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**25**
≤8	100	100	100	100	100	100	100	100	100	100	100	100
13	100	100	100	100	100	100	100	100	100	100	100	100
19	100	100	100	100	100	100	100	100	100	100	100	100
23	100	100	100	100	100	100	100	100	100	100	200	200
28	100	100	100	100	100	100	100	100	105	113	250	250
33	100	100	100	100	100	100	106	114	123	132	350	350
38	100	100	100	100	100	110	120	130	140	150	400	400
42	100	100	100	105	113	200	200	200	200	200	500	550
47	100	150	150	150	150	250	250	250	250	250	550	650
52	100	200	200	200	200	350	350	350	350	350	650	800
56	100	200	200	200	200	400	400	400	400	400	700	900
61	115	250	250	250	250	500	500	500	500	500	800	1050
66	125	300	300	300	300	550	550	550	550	550	900	1200
70	137	350	350	350	350	650	650	650	650	650	1000	1350
75	150	400	400	400	400	700	700	700	700	700	1100	1500

Buffer Zone Table 9: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Sprinkler Applications with **Three** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤6	90	90	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	90	90	100	100
19	90	90	90	90	90	90	90	90	90	94	107	125	163	182
23	90	90	90	90	90	90	90	98	105	113	138	175	225	263
27	90	90	90	90	90	97	106	114	123	132	169	225	288	344
31	90	90	90	94	100	110	120	130	140	150	200	275	350	425
35	90	90	97	105	113	125	138	150	163	175	250	357	438	519
39	90	97	106	116	125	131	140	146	155	200	300	438	525	613
43	93	104	116	127	138	155	173	190	208	225	350	519	613	707
47	100	113	125	138	150	170	190	210	230	250	400	600	700	800
50	115	129	143	157	171	185	199	213	283	288	450	650	775	900
54	125	138	150	163	175	205	235	265	295	325	500	700	850	1000

Buffer Zone Table 10: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Sprinkler Applications with **Two** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤6	90	90	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	180	180	180	180
19	90	90	90	90	90	90	90	90	90	94	225	225	270	270
23	90	90	90	90	90	90	90	98	105	113	315	315	360	360
27	90	90	90	90	90	97	106	114	123	132	360	360	450	450
31	90	90	90	94	100	180	180	180	180	180	450	495	585	585
35	90	135	135	135	135	225	225	225	225	225	495	585	720	720
39	90	180	180	180	180	360	360	360	360	360	630	810	990	990
43	93	225	225	225	225	450	450	450	450	450	720	945	1170	1170
47	100	270	270	270	270	495	495	495	495	495	810	1080	1305	1305
50	115	315	315	315	315	585	585	585	585	585	900	1215	1485	1485
54	125	360	360	360	360	630	630	630	630	630	990	1350	1620	1620

Buffer Zone Table 11: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Sprinkler Applications with **One** Post-Application Water Treatments

	Application Block Size (acres)													
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**30**	**40**	**50**
≤6	90	90	90	90	90	180	180	180	180	180	270	540	720	900
11	90	270	270	270	270	450	450	450	450	450	810	990	1260	1440
16	135	405	405	405	405	675	675	675	675	675	1080	1350	1620	1755
19	135	540	540	540	540	855	855	855	855	855	1395	1665	1980	2070
23	180	675	675	675	675	1035	1035	1035	1035	1035	1665	2025	NA	NA
27	180	810	810	810	810	1260	1260	1260	1260	1260	1980	NA	NA	NA
31	270	945	945	945	945	1440	1440	1440	1440	1440	NA	NA	NA	NA
35	315	1035	1035	1035	1035	1620	1620	1620	1620	1620	NA	NA	NA	NA
39	450	1260	1260	1260	1260	1980	1980	1980	1980	1980	NA	NA	NA	NA
43	495	1350	1350	1350	1350	2070	2070	2070	2070	2070	NA	NA	NA	NA
47	540	1485	1485	1485	1485	2160	2160	2160	2160	2160	NA	NA	NA	NA
50	585	1620	1620	1620	1620	2250	2250	2250	2250	2250	NA	NA	NA	NA
54	630	1710	1710	1710	1710	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA= Not Allowed Buffer Zone Greater Than ½ Mile

Buffer Zone Table 12: Table Eleven: Sectagon-K54 and K-Pam (54% metam potassium)
Buffer Zone Values for Sprinkler Applications with **4 a.m Start**

	Application Block Size (acres)											
Gal/A	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**20**	**25**
≤6	90	90	90	90	90	90	90	90	90	90	90	90
11	90	90	90	90	90	90	90	90	90	90	90	90
16	90	90	90	90	90	90	90	90	90	90	180	180
19	90	90	90	90	90	90	90	90	90	94	225	225
23	90	90	90	90	90	90	90	98	105	113	315	315
27	90	90	90	90	90	97	106	114	123	132	360	360
31	90	90	90	94	135	180	180	180	180	180	450	495
35	90	90	135	135	135	225	225	225	225	225	495	585
39	90	180	180	180	180	315	360	360	360	360	630	810
43	93	225	225	225	225	450	450	450	450	450	720	945
47	100	270	270	270	270	495	495	495	495	495	810	1080
50	115	315	315	315	315	585	585	585	585	585	900	1215
54	125	360	360	360	360	630	630	630	630	630	990	1350

Appendix I: Definitions

Application: Activities required to incorporate metam sodium, metam potassium, or dazomet into the prepared soil. Applying additional water to the treated soil in order to suppress offsite movement of MITC is not part of the application process.

Bystander Area: An area typically used or visited by people, such as parks, playgrounds, lakes, reservoirs, bus stops, and other similar areas, or other areas identified by the CAC.

Calm Day: Day when wind speeds are forecasted to drop below 5 miles per hour and/or when field observation confirms the same.

Drench Application: Application is made to pre-formed beds or to rows, using low-pressure (30–35 pounds per square inch) booms with nozzles <12 inches above the top of the beds.

MITC: Methyl isothiocyanate. A breakdown product of metam sodium, metam potassium, and dazomet.

Offsite Movement Suppression Requirement: Written procedures that will provide an adequate emergency response in the event MITC odors from metam sodium, metam potassium, or dazomet are detected away from the application site, or symptoms are reported. The plan provides instructions on response procedures to cooperators and employees involved in metam sodium, metam potassium, and dazomet applications. This requirement is separate from the post-application water treatment requirements.

Occupied Structure: A structure that is, will be, or may be occupied at any time during the application and/or buffer-zone period. This includes living and working areas that are associated with the structure (e.g., yard, garden). Homes occupied by the property owner or permittee are excluded from this definition.

Ozone Nonattainment Area: An area designated in Title 40, Code of Federal Regulations section 81.305 for the purpose of air quality planning within the chart titled "California – Ozone (1-Hour Standard)."

Post-Application Water Treatment: Required water that is applied following completion of an application of MITC for the purpose of inhibiting offgassing from treated soils. Each post-application water treatment must be applied following the constraints pertaining to post-application timing, quantity, rate, and duration as listed in the post-application requirements section of the Recommended Permit Conditions.

Power Mulcher Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven mulcher. The treated soil is mulched with untreated soil at a depth set to where pest control is desired and immediately compressed by a soil compacting device.

Rod Bar Application: Backward-facing hollow tube (rod) attached to a metal blade-like horizontal bar. The rod bar is designed to operate under the surface of pre-formed beds, dispersing metam through holes spaced ½–1 inch linearly along the entire length of the bar. The application is immediately followed by a bed shaper or solid press rollers that compact the soil over the treated area. The rod bar application method is a variation of the shank injection method described on metam sodium and metam potassium product labels. As such, follow the product label requirements for shank injection applications when using the rod bar application method.

Rotary Tiller Application: Metam is sprayed on or injected under the soil surface immediately in front of a power driven tiller. The treated soil is tilled with untreated soil at a depth set to where control is desired and immediately compressed by a soil-compaction device.

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 California 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://www.cdss.ca.gov/inforesources/community-care-licensing/facility-search-welcome. Search by ZIP code, city, or county to find the names and addresses of the following child care centers in a specific area.)

Soil Capping Application: Following a metam sodium or metam potassium band treatment, a minimum of 6 inches of untreated soil is placed over the band.

Spray Blade Application: An 8–14 inch horizontal "V"-shaped blade designed to operate under the soil surface with one or two backward-facing spray nozzles placed under the leading edge. The blade is placed 1–4 inches below the soil surface and the resulting subsurface band is further covered with disk-hillers immediately following to form a minimum 6-inch protective cap over the treated band.