PROPOSED MITIGATION MEASURES FOR MITC GENERATING PESTICIDES

California Environmental Protection Agency
Department of Pesticide Regulation

MITC MITIGATION

WHAT IS MITC?

- **Methyl isothiocyanate.**
- Breakdown product of:

Metam sodium
Metam potassium, and
Dazomet.

PURPOSE OF MITC MITIGATION

- To reduce the off-site movement of MITC from the treated fields
- To protect non-occupational: residents, and bystanders-people who frequently visit
- MITC and other MITC-generating pesticides are desiginated as Toxic Air Contaminants.

Application Methods
For metam-sodium and metam-potassium

- **Sprinkler**
- **Shank**
- **Rod bar**
- **Spray blade**
- **Drip**
- **Flood**
- **Drench**
- **Rotary tiller**
- **Power mulcher**

Application Methods for Dazomet Only

- **F**ield fumigation applications
- **D**rop-type spreader
- **G**ranular product spreader

STRATEGIC DEVELOPMENT OF MITIGATION

- 2002 – DPR completed the risk assessment for metam sodium and other MITC-G pesticides.
- 2002 – DPR management determined that the first mitigation effort should address acute (short-term) off-site exposure to non-occupational
- 2003 – DPR began meeting with stakeholders for comments to develop mitigation measures.

STRATEGIC DEVELOPMENT OF MITIGATION

- 2004 – 2006. DPR continued meeting with CAC, stakeholders, and others for their inputs, comments to develop mitigation measures.
- 2007 – DPR prepared a draft mitigation measures, & sent to all interested parties, & held public meeting
- 2007 – DPR collected comments, and revised draft mitigation measures based on their comments.
- 2008 – DPR hold draft mitigation measures until **VOC** regulations were completed.

STRATEGIC DEVELOPMENT OF MITIGATION

- 2009 –DPR again sent draft revised mitigation measures to stakeholders for comments, and

- 2009 –DPR further revised mitigation measures based on their comments

- 2010 – DPR management reviewed mitigation measures, to be implemented as suggested permit conditions.

MITC MITIGATION MEASURES

The mitigation measures focus on three areas:

- Buffer Zones
- Application Timing
- Post-Application Water Treatments

MITC MITIGATION MEASURES

BUFFER ZONE DETERMINATION FACTORS

- Buffer zone based on:
  - **A**cres treated
  - **A**pplication rate
  - **N**umber of water treatment.
- Buffer zone:
  - 100 – 2640 ft
- Buffer zone duration:
  - 24 – 48 hrs.

MITC MITIGATION MEASURES
BUFFER ZONES

- CAC may designate different buffer zones based on:

  local weather conditions,

  application method, and

  time of applications.

MITC MITIGATION MEASURES
APPICATION TIMING
Metam sodium/potassium application

- With the exceptions of three nighttime application methods, all applications must be made during day time.

MITC MITIGATION MEASURES
APPICATION TIMING
Metam sodium/potassium application

- Must begin no earlier than one hour after sunrise, and
- Must be completed in time to allow post-application water treatment to begin no later than one hour before sunset.

Post Application Water Treatments in Sensitive Areas:

- A minimum of three post-application water treatments.
- First post-app treatment: Must start within 30 minutes of completion of application.

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MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
Metam sodium/potassium applications

Second post-application water treatment:

- Same day of application
- Beginning 1 hour before sunset, and
- Complete by midnight.

MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
Metam sodium/potassium applications

Third post-application water treatment:

- Following day of application
- Beginning 1 hour before sunset, and
- Complete by midnight.

Post Application Water Treatments in Sensitive Areas:

A minimum of two post–application water treatments are required:

First post-application water treatment:

- Must start within 30 minutes of completion of the application.

MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
Metam sodium/potassium applications

Second post-application of water treatment:

- Must start same day of application,
- Beginning 1 hour before sunset, and
- Must complete by midnight

MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
Metam sodium/potassium applications

EXCEPTIONS

Post-application water treatments are not required when:

POST-APPLICAION WATER TREATMENTS

Metam sodium/potassium soil injection applications

EXCEPTIONS

ONE

When a soil cap is used.

- a minimum of 6 inches of untreated soil is placed over the band treatment

POST-APPLICAION WATER TREATMENTS

Metam sodium/potassium soil injection applications

EXCEPTIONS

TWO

When the treated area is tarped.

POST-APPLICAION WATER TREATMENTS

Metam sodium/potassium soil injection applications

EXCEPTIONS

THREE

- When flood application method is used.

POST-APPLICAION WATER TREATMENTS

Metam sodium/potassium soil injection applications

EXCEPTIONS

FOUR

- When a drip application method is applied.

SPECIFIC REQUIREMENTS
Metam sodium/potassium applications

Number of acres that can be treated are limited by the application type and whether the site is in a sensitive or standard area.

POST-APPLICAION WATER TREATMENTS
DAZOMET APPLICATIONS

- A minimum of Five post–application water treatments are required for Dazomet applications.
- Only Day time applications are allowed.
- Dazomet applications have same start and finish limitations as metam sodium and metam potassium.

MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
DAZOMET APPLICATIONS

- First post-application water treatment–must start within 30 minutes of completion of the application.
- Second post-app treatment–must start the same day of application, beginning 1 before sunset and complete by midnight.

MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
DAZOMET APPLICATIONS

- Third post-app treatment–must start second day beginning 1 hour before sunset and complete by midnight.

- Fourth post-app treatment – must start third day beginning no earlier than 1 hour before sunset and complete by midnight.

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MITIGATION MEASURES:
POST-APPLICAION WATER TREATMENTS
DAZOMET APPLICATIONS

- Fifth post-application water treatment – must start fourth day of application beginning no earlier than 1 hour before sunset and complete by midnight.

DPR TIMELINE FOR IMPLEMENTING MITIGATION MEASURES

- Worker Health & Safety is working with Enforcement staff to develop the mitigation measures into suggested permit conditions.
- Our goal is to send out by June 2010 with implementation in July of 2010.

FEDERAL MITIGATION MEASURES

- USEPA finalized mitigation measures for MITC-*G* pesticides and other fumigants.
- Some measures will be included on new labels in December of 2010.
- New Buffer zones will also be included in new labels in 2011.

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FEDERAL MITIGATION MEASURES

- DPR has been working with USEPA throughout the mitigation development process, however;
- There are differences in what DPR proposes and what USEPA has finalized.

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FEDERAL MITIGATION MEASURES

- Once USEPA label amendments complete,
- DPR will review suggested permit conditions to see what changes are needed, OR
- If additional permit conditions are needed over what USEPA requires.
- DPR and USEPA planning joint training sessions beginning December 2010.