## APPENDIX 1

- a. SUMMARY OF APPLICATION METHOD ADJUSTMENT FACTORS AND METHOD USE FRACTIONS
- b. FIELD FUMIGATION METHODS (FFM), FFM CODE FOR PESTICIDE USE REPORTING, AND EMISSION RATING

## APPENDIX 1a – SUMMARY OF APPLICATION METHOD ADJUSTMENT FACTORS AND METHOD USE FRACTIONS

Table A1 - 1. Application Method Adjustment Factors (AMAF) for 2004 - 2007.

	AMAF								
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio carbonate			
Shallow injection									
w/ high									
permeability tarp									
or no tarp-				not	not	not			
broadcast	61*	64*	74*	applicable	applicable	applicable			
Shallow injection									
w/ low									
permeability tarp-	not			not	not	not			
broadcast	applicable	44	48	applicable	applicable	applicable			
Shallow injection w/ high permeability tarp or no tarp-bed	not applicable	64*	100*	77*	not applicable	not applicable			
Shallow injection	- 11	-			11	11			
w/ low									
permeability tarp-	not			not	not	not			
bed	applicable	64*	100*	applicable	applicable	applicable			
Shallow injection	- 11		not	11	not	not			
w/ water treatments	41	20	applicable	21	applicable	applicable			
Shallow injection	not		not		not	not			
w/ soil cap	applicable	not applicable	applicable	14	applicable	applicable			
Deep injection w/ high permeability									
tarp or no tarp-	4.1	C A ala	7 A de	not	not	not			
broadcast	41	64*	74*	applicable	applicable	applicable			
Deep injection w/ low permeability tarp-broadcast	not applicable	44	48	not applicable	not applicable	not applicable			
Deep injection w/			not	not	not	not			
water treatments	27	20	applicable	applicable	applicable	applicable			
Rotovate/rototill	not		not			not			
	applicable	not applicable	applicable	14	17	applicable			
Sprinkler	not applicable	not applicable	not applicable	77*	not applicable	10			
Sprinkler w/ water	not		not		not	not			
treatments	applicable	not applicable	applicable	21	applicable	applicable			
Flood	not applicable	not applicable	not applicable	77*	not applicable	10			
Drip w/ high									
permeability tarp			not		not				
or no tarp	29	not applicable	applicable	9	applicable	10			
Drip w/ low	not		not		not	not			
permeability tarp	applicable	15	applicable	9	applicable	applicable			
Non-field soil									
(structural/post- harvest)	not applicable	100	100	not applicable	not applicable	not applicable			

<sup>\*</sup> These are considered "high-emission" fumigation methods and are prohibited within the San Joaquin Valley, Southeast Desert, and Ventura NAAs during May-October.

Table A1 - 2. 1990 frequency of fumigation methods used (method use fractions) in the Sacramento Metro nonattainment area.

	% of Amount Applied						
Fumigation Method <sup>1</sup>	1,3- D <sup>2</sup>	Chloropicrin	Methyl Bromide	Metam <sup>3</sup>	Dazomet	Na Tetrathio carbonate <sup>4</sup>	
Shallow injection w/ high permeability tarp or no tarp-broadcast		42	37				
Shallow injection w/ low permeability tarp-broadcast							
Shallow injection w/ high permeability tarp or no tarp-bed		42	36	3			
Shallow injection w/ low permeability tarp-bed							
Shallow injection w/ water treatments Shallow injection w/ soil							
cap				15			
Deep injection w/ high permeability tarp or no tarp-broadcast		16	14				
Deep injection w/ low permeability tarp-broadcast							
Deep injection w/ water treatments					100		
Rotovate/rototill Sprinkler				55	100	33	
Sprinkler w/ water treatments							
Flood				10		33	
Drip w/ high permeability tarp or no tarp				10		34	
Drip w/ low permeability tarp				5			
Non-field soil (structural/post-harvest)			13				

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> Use of 1,3-D was suspended in early 1990.

<sup>3</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

<sup>4</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 3. 1990 frequency of fumigation methods used (method use fractions) in the San Joaquin Valley nonattainment area.

	% of Amount Applied						
Fumigation Method <sup>1</sup>	1,3- D <sup>2</sup>	Chloropicrin	Methyl Bromide	Metam <sup>3</sup>	Dazomet	Na Tetrathio carbonate <sup>4</sup>	
Shallow injection w/ high permeability tarp or no		•					
tarp-broadcast		29	29				
Shallow injection w/ low permeability tarp-broadcast							
Shallow injection w/ high permeability tarp or no							
tarp-bed		29	29	8			
Shallow injection w/ low permeability tarp-bed							
Shallow injection w/ water treatments							
Shallow injection w/ soil				25			
Dan inication on/ Link				23			
Deep injection w/ high							
permeability tarp or no tarp-broadcast		42	42				
Deep injection w/ low							
permeability tarp-broadcast							
Deep injection w/ water							
treatments					100		
Rotovate/rototill				3	100		
Sprinkler				60		33	
Sprinkler w/ water treatments							
						22	
Flood						33	
Drip w/ high permeability tarp or no tarp				2		34	
Drip w/ low permeability						3.	
tarp				2			
Non-field soil							
(structural/post-harvest)							

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> Use of 1,3-D was suspended in early 1990.

<sup>3</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

<sup>4</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 4. 1990 frequency of fumigation methods used (method use fractions) in the Southeast Desert nonattainment area.

	% of Amount Applied							
Fumigation Method <sup>1</sup>	1,3- D <sup>2</sup>	Chloropicrin	Methyl Bromide	Metam <sup>3</sup>	Dazomet	Na Tetrathio carbonate <sup>4</sup>		
Shallow injection w/ high								
permeability tarp or no tarp-broadcast		50	35					
Shallow injection w/ low permeability tarp-broadcast								
Shallow injection w/ high permeability tarp or no								
tarp-bed		50	34	10				
Shallow injection w/ low permeability tarp-bed								
Shallow injection w/ water								
treatments								
Shallow injection w/ soil cap								
Deep injection w/ high								
permeability tarp or no								
tarp-broadcast								
Deep injection w/ low								
permeability tarp-broadcast								
Deep injection w/ water								
treatments								
Rotovate/rototill					100			
Sprinkler				30		33		
Sprinkler w/ water								
treatments								
Flood				50		33		
Drip w/ high permeability	_				_			
tarp or no tarp				5		34		
Drip w/ low permeability	_				_			
tarp				5				
Non-field soil								
(structural/post-harvest)			31					

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> Use of 1,3-D was suspended in early 1990.

<sup>3</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied

<sup>4</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 5. 1990 frequency of fumigation methods used (method use fractions) in the Ventura nonattainment area.

	% of Amount Applied							
Fumigation Method <sup>1</sup>	1,3- D <sup>2</sup>	Chloropicrin	Methyl Bromide	Metam <sup>3</sup>	Dazomet	Na Tetrathio carbonate <sup>4</sup>		
Shallow injection w/ high								
permeability tarp or no								
tarp-broadcast		50	49					
Shallow injection w/ low								
permeability tarp-broadcast								
Shallow injection w/ high								
permeability tarp or no								
tarp-bed		50	49	20				
Shallow injection w/ low								
permeability tarp-bed								
Shallow injection w/ water								
treatments								
Shallow injection w/ soil								
cap								
Deep injection w/ high								
permeability tarp or no								
tarp-broadcast								
Deep injection w/ low								
permeability tarp-broadcast								
Deep injection w/ water								
treatments								
Rotovate/rototill					100			
Sprinkler				50		33		
Sprinkler w/ water								
treatments								
Flood						33		
Drip w/ high permeability								
tarp or no tarp				15		34		
Drip w/ low permeability								
tarp				15				
Non-field soil								
(structural/post-harvest)			3					

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> Use of 1,3-D was suspended in early 1990.

<sup>3</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied

<sup>4</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 6. 1990 frequency of fumigation methods used (method use fractions) in the South Coast nonattainment area.

	% of Amount Applied							
Fumigation Method <sup>1</sup>	1,3- D <sup>2</sup>	Chloropicrin	Methyl Bromide	Metam <sup>3</sup>	Dazomet	Na Tetrathio carbonate <sup>4</sup>		
Shallow injection w/ high permeability tarp or no								
tarp-broadcast		50	3					
Shallow injection w/ low permeability tarp-broadcast								
Shallow injection w/ high permeability tarp or no								
tarp-bed		50	3	20				
Shallow injection w/ low permeability tarp-bed								
Shallow injection w/ water treatments								
Shallow injection w/ soil								
cap								
Deep injection w/ high								
permeability tarp or no								
tarp-broadcast								
Deep injection w/ low								
permeability tarp-broadcast								
Deep injection w/ water								
treatments								
Rotovate/rototill					100			
Sprinkler				50		33		
Sprinkler w/ water								
treatments								
Flood						33		
Drip w/ high permeability								
tarp or no tarp				15		34		
Drip w/ low permeability								
tarp				15				
Non-field soil								
(structural/post-harvest)			95					

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> Use of 1,3-D was suspended in early 1990.

<sup>3</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied

<sup>4</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 7. 2005 frequency of fumigation methods used (method use fractions) in the Sacramento Metro nonattainment area.

	% of Amount Applied					
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high permeability tarp or no tarp-broadcast						
Shallow injection w/ low permeability tarp-broadcast		56.0	11.3			
Shallow injection w/ high permeability tarp or no tarp-bed				21		
Shallow injection w/ low permeability tarp-bed Shallow injection w/ water		33.0	6.3			
treatments Shallow injection w/ soil						
Deep injection w/ high permeability tarp or no tarp-broadcast	99			15		
Deep injection w/ low permeability tarp- broadcast			11.4			
Deep injection w/ water treatments Rotovate/rototill					100	
Sprinkler Sprinkler w/ water				45	100	33
treatments Flood Drip w/ high permeability						33
tarp or no tarp  Drip w/ low permeability	1	11.0		9		34
tarp Non-field soil (structural/post-harvest)		11.0	70.9	10		

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 8. 2005 frequency of fumigation methods used (method use fractions) in the San Joaquin Valley nonattainment area.

	% of Amount Applied					
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high permeability tarp or no tarp-broadcast	2					
Shallow injection w/ low permeability tarp-broadcast		97.0	79.5			
Shallow injection w/ high permeability tarp or no tarp-bed		77.0	77.3	21		
Shallow injection w/ low permeability tarp-bed			0.6			
Shallow injection w/ water treatments Shallow injection w/ soil						
cap  Deep injection w/ high				20		
permeability tarp or no tarp-broadcast	97	1.0				
Deep injection w/ low permeability tarp- broadcast		1.0	16.3			
Deep injection w/ water treatments						
Rotovate/rototill				2.5	100	22
Sprinkler Sprinkler w/ water treatments				35		33
Flood						33
Drip w/ high permeability tarp or no tarp	1			14		34
Drip w/ low permeability tarp				10		
Non-field soil (structural/post-harvest)		1.0	3.7			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 9. 2005 frequency of fumigation methods used (method use fractions) in the Southeast Desert nonattainment area.

	% of Amount Applied						
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>	
Shallow injection w/ high permeability tarp or no tarp-broadcast							
Shallow injection w/ low permeability tarp-broadcast		88	77.1				
Shallow injection w/ high permeability tarp or no tarp-bed				6			
Shallow injection w/ low permeability tarp-bed			18.9				
Shallow injection w/ water treatments							
Shallow injection w/ soil cap							
Deep injection w/ high permeability tarp or no tarp-broadcast	10						
Deep injection w/ low permeability tarp- broadcast			1.1				
Deep injection w/ water treatments							
Rotovate/rototill					100		
Sprinkler Sprinkler w/ water treatments				75		33	
Flood						33	
Drip w/ high permeability tarp or no tarp	90	5		7		34	
Drip w/ low permeability tarp		5		12			
Non-field soil (structural/post-harvest)		2	2.9				

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied <sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 10. 2005 frequency of fumigation methods used (method use fractions) in the Ventura nonattainment area.

	% of Amount Applied					
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	•					
permeability tarp or no						
tarp-broadcast	1					
Shallow injection w/ low						
permeability tarp-						
broadcast		67	100.0			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed						
Shallow injection w/ low						
permeability tarp-bed						
Shallow injection w/ water						
treatments				25		
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	4					
Deep injection w/ low						
permeability tarp-						
broadcast						
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler						33
Sprinkler w/ water						
treatments				20		
Flood						33
Drip w/ high permeability						
tarp or no tarp	95			5		34
Drip w/ low permeability						
tarp		33		50		
Non-field soil						
(structural/post-harvest)						

Fumigation methods are described in detail in the memo Barry et al., 2007.

2 DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied

<sup>&</sup>lt;sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 11. 2005 frequency of fumigation methods used (method use fractions) in the South Coast nonattainment area.

	% of Amount Applied						
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>	
Shallow injection w/ high							
permeability tarp or no							
tarp-broadcast							
Shallow injection w/ low							
permeability tarp-							
broadcast		40	60.9				
Shallow injection w/ high							
permeability tarp or no							
tarp-bed				25			
Shallow injection w/ low							
permeability tarp-bed		36	30.8				
Shallow injection w/ water							
treatments							
Shallow injection w/ soil							
cap							
Deep injection w/ high							
permeability tarp or no							
tarp-broadcast	2						
Deep injection w/ low							
permeability tarp-							
broadcast			0.5				
Deep injection w/ water							
treatments							
Rotovate/rototill					100		
Sprinkler				20		33	
Sprinkler w/ water							
treatments							
Flood						33	
Drip w/ high permeability							
tarp or no tarp	98			5		34	
Drip w/ low permeability							
tarp		24		50			
Non-field soil							
(structural/post-harvest)			7.8				

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 12. 2006 frequency of fumigation methods used (method use fractions) in the Sacramento Metro nonattainment area.

	% of Amount Applied						
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>	
Shallow injection w/ high	,-						
permeability tarp or no							
tarp-broadcast	3						
Shallow injection w/ low							
permeability tarp-							
broadcast		56.0	11.3				
Shallow injection w/ high							
permeability tarp or no							
tarp-bed				21			
Shallow injection w/ low							
permeability tarp-bed		33.0	6.3				
Shallow injection w/ water							
treatments							
Shallow injection w/ soil							
cap				15			
Deep injection w/ high							
permeability tarp or no							
tarp-broadcast	95						
Deep injection w/ low							
permeability tarp-							
broadcast			11.4				
Deep injection w/ water							
treatments							
Rotovate/rototill					100		
Sprinkler				45		33	
Sprinkler w/ water							
treatments							
Flood						33	
Drip w/ high permeability							
tarp or no tarp	2			9		34	
Drip w/ low permeability							
tarp		11.0		10			
Non-field soil							
(structural/post-harvest)			70.9				

Fumigation methods are described in detail in the memo Barry et al., 2007.

DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied

<sup>&</sup>lt;sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 13. 2006 frequency of fumigation methods used (method use fractions) in the San Joaquin Valley nonattainment area.

		9/6	of Amou	nt Annli	ed ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	•	•				
permeability tarp or no						
tarp-broadcast	2					
Shallow injection w/ low						
permeability tarp-						
broadcast		97.0	79.5			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed				21		
Shallow injection w/ low						
permeability tarp-bed			0.6			
Shallow injection w/ water						
treatments						
Shallow injection w/ soil						
cap				20		
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	97	1.0				
Deep injection w/ low						
permeability tarp-						
broadcast		1.0	16.3			
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler				35		33
Sprinkler w/ water						
treatments						
Flood						33
Drip w/ high permeability						
tarp or no tarp	1			14		34
Drip w/ low permeability						
tarp				10		
Non-field soil						
(structural/post-harvest)		1.0	3.7			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 14. 2006 frequency of fumigation methods used (method use fractions) in the Southeast Desert nonattainment area.

		0/0	of Amou	nt Appli	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	,	•				
permeability tarp or no						
tarp-broadcast						
Shallow injection w/ low						
permeability tarp-						
broadcast		88.0	77.1			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed				6		
Shallow injection w/ low						
permeability tarp-bed			18.9			
Shallow injection w/ water						
treatments						
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	16					
Deep injection w/ low						
permeability tarp-						
broadcast		0.2	1.1			
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler				75		33
Sprinkler w/ water						
treatments						
Flood						33
Drip w/ high permeability						
tarp or no tarp	84	5.0		7		34
Drip w/ low permeability						
tarp		5.0		12		
Non-field soil						
(structural/post-harvest)		2.0	2.9			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> DPR DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied <sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 15. 2006 frequency of fumigation methods used (method use fractions) in the Ventura nonattainment area.

		9/6	of Amou	nt Appli	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	,	•				
permeability tarp or no						
tarp-broadcast						
Shallow injection w/ low						
permeability tarp-						
broadcast		67.0	100.0			
Shallow injection w/ high permeability tarp or no tarp-bed						
Shallow injection w/ low						
permeability tarp-bed						
Shallow injection w/ water						
treatments				25		
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	7					
Deep injection w/ low						
permeability tarp-						
broadcast						
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler						33
Sprinkler w/ water						
treatments				20		
Flood						33
Drip w/ high permeability				_		
tarp or no tarp	93			5		34
Drip w/ low permeability						
tarp		33.0		50		
Non-field soil						
(structural/post-harvest)						

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied <sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 16. 2006 frequency of fumigation methods used (method use fractions) in the South Coast nonattainment area.

		9/0	of Amou	nt Applie	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high						
permeability tarp or no						
tarp-broadcast						
Shallow injection w/ low						
permeability tarp-						
broadcast		40.0	60.9			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed				25		
Shallow injection w/ low						
permeability tarp-bed		36.0	30.8			
Shallow injection w/						
water treatments						
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast						
Deep injection w/ low						
permeability tarp-						
broadcast			0.5			
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler				20		33
Sprinkler w/ water						
treatments						
Flood						33
Drip w/ high permeability						
tarp or no tarp	100			5		34
Drip w/ low permeability						
tarp		24.0		50		
Non-field soil						
(structural/post-harvest)			7.8			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 17. 2007 frequency of fumigation methods used (method use fractions) in the Sacramento Metro nonattainment area.

		%	of Amou	nt Appli	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high permeability tarp or no tarp-broadcast	0.0					
Shallow injection w/ low permeability tarp-broadcast		56.0	11.3			
Shallow injection w/ high permeability tarp or no tarp-bed				21		
Shallow injection w/ low permeability tarp-bed Shallow injection w/ water		33.0	6.3			
treatments Shallow injection w/ soil						
Deep injection w/ high permeability tarp or no tarp-broadcast	99.9			15		
Deep injection w/ low permeability tarp- broadcast	77.7		11.4			
Deep injection w/ water treatments Rotovate/rototill					100	
Sprinkler Sprinkler w/ water treatments				45	100	33
Flood Drip w/ high permeability						33
tarp or no tarp  Drip w/ low permeability tarp	0.1	11.0		9		34
Non-field soil (structural/post-harvest)			70.9			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 18. 2007 frequency of fumigation methods used (method use fractions) in the San Joaquin Valley nonattainment area.

		9/6	of Amou	nt Annli	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	•	•				
permeability tarp or no						
tarp-broadcast	0.3					
Shallow injection w/ low						
permeability tarp-						
broadcast		97.0	79.5			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed				21		
Shallow injection w/ low						
permeability tarp-bed			0.6			
Shallow injection w/ water						
treatments						
Shallow injection w/ soil						
cap				20		
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	99.3	1.0				
Deep injection w/ low						
permeability tarp-						
broadcast		1.0	16.3			
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler				35		33
Sprinkler w/ water						
treatments						
Flood						33
Drip w/ high permeability						
tarp or no tarp	0.4			14		34
Drip w/ low permeability						
tarp				10		
Non-field soil						
(structural/post-harvest)		1.0	3.7			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 19. 2007 frequency of fumigation methods used (method use fractions) in the Southeast Desert nonattainment area.

		9/0	of Amou	nt Appli	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	,	•				
permeability tarp or no						
tarp-broadcast	0.4					
Shallow injection w/ low						
permeability tarp-						
broadcast		88.0	77.1			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed				6		
Shallow injection w/ low						
permeability tarp-bed			18.9			
Shallow injection w/ water						
treatments						
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	0.0					
Deep injection w/ low						
permeability tarp-						
broadcast		0.2	1.1			
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler				75		33
Sprinkler w/ water						
treatments						
Flood						33
Drip w/ high permeability						
tarp or no tarp	99.6	5.0		7		34
Drip w/ low permeability						
tarp		5.0		12		
Non-field soil						
(structural/post-harvest)  1 Fumination methods are described		2.0	2.9			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>2</sup> DPR DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied

<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 20. 2007 frequency of fumigation methods used (method use fractions) in the Ventura nonattainment area.

		9/6	of Amou	nt Appli	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high	,	•				
permeability tarp or no						
tarp-broadcast						
Shallow injection w/ low						
permeability tarp-						
broadcast		67.0	100.0			
Shallow injection w/ high permeability tarp or no tarp-bed						
Shallow injection w/ low						
permeability tarp-bed						
Shallow injection w/ water						
treatments				25		
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast	5.0					
Deep injection w/ low						
permeability tarp-						
broadcast						
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler						33
Sprinkler w/ water						
treatments				20		
Flood						33
Drip w/ high permeability						
tarp or no tarp	94.9			5		34
Drip w/ low permeability					_	
tarp		33.0		50		
Non-field soil						
(structural/post-harvest)				<u></u>		

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied <sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 21. 2007 frequency of fumigation methods used (method use fractions) in the South Coast nonattainment area.

		%	of Amour	nt Applie	ed	
Fumigation Method <sup>1</sup>	1,3-D	Chloropicrin	Methyl Bromide	Metam	Dazomet	Na Tetrathio- carbonate <sup>3</sup>
Shallow injection w/ high						
permeability tarp or no						
tarp-broadcast						
Shallow injection w/ low						
permeability tarp-						
broadcast		40.0	60.9			
Shallow injection w/ high						
permeability tarp or no						
tarp-bed				25		
Shallow injection w/ low						
permeability tarp-bed		36.0	30.8			
Shallow injection w/						
water treatments						
Shallow injection w/ soil						
cap						
Deep injection w/ high						
permeability tarp or no						
tarp-broadcast						
Deep injection w/ low						
permeability tarp-						
broadcast			0.5			
Deep injection w/ water						
treatments						
Rotovate/rototill					100	
Sprinkler				20		33
Sprinkler w/ water						
treatments						
Flood						33
Drip w/ high permeability						
tarp or no tarp	100.0			5		34
Drip w/ low permeability						
tarp		24.0		50		
Non-field soil						
(structural/post-harvest)			7.8			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.
<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 22. Application Method Adjustment Factors (AMAF) for 2008.

					AMA	F		
Fumigation Method	Code	1,3-D	Chloro -picrin	Methyl Bromide	Metam Na	Metam K	Dazomet	Na Tetrathio- carbonate
Chemigation (Drip System)/Tarpaulin	1209	19	12					
Chemigation (Drip)	1601							10
Chemigation (minisprinkler)	1602							10
Day Chemigation (Drip System) Nontarpaulin	1408				9	9		
Day Chemigation (Drip System) Tarpaulin	1407				9	9		
Day Drench	1413				100	100		
Day Nontarpaulin/Shallow/ Broadcast or Bed /Two Water Treatments	1405				28			
Day Nontarpaulin/Shallow/ Broadcast or Bed/Three Water Treatments	1406				21	21		
Day Power Mulcher	1410				14	14		
Day Rotary Tiller	1409					14		
Day Soil Capping	1411				14	14		
Day Sprinkler/Broadcast or Bed/One Water Treatment	1401				77	77		
Day Sprinkler/Broadcast or Bed/Three Water Treatments	1403				21	21		
Day Sprinkler/Broadcast or Bed/Two Water Treatments	1402				28	28		
Day or Night Flood	1412				77			
Night 4 A.M. Start/Sprinkler/ Broadcast or Bed/Two Water treatments	1472				35			
Night Nontarpaulin/Shallow/	1455				13	13		

			•		•	1	
Broadcast or Bed/Two							
Water Treatments							
Night							
Sprinkler/Broadcast or	1452				77		
Bed/Two Water	1432				//		
Treatments							
Nontarpaulin/Deep/	1206	26	64				
Broadcast or Bed	1206	26	64				
Other label method -	1100		100	100			
Methyl Bromide	1190		100	100			
Tarpaulin/Deep/Bed							
	1208	26					
T 1' /D /							
Tarpaulin/Deep/ Broadcast	1207	26					
Tarpaulin/Shallow/Bed	1106						10
	1100						10
Tarpaulin/Deep/Broad	1107			48			
cast	1107			40			
Tarpaulin/Shallow/							
Broadcast – Nobel	1103		44	48			
Plow							
1p :				1 2007			

Fumigation methods are described in detail in the memo Barry et al., 2007.

DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 23. 2008 frequency of fumigation methods used (method use fractions) in the Sacramento Metro nonattainment area.

			% of Amount Applied								
Fumigation Method	Code	1,3-D	Chloro -picrin	Methyl Bromide	Metam Na	Metam K	Dazomet	Na Tetrathio- carbonate			
Chemigation (Drip System)/Tarpaulin	1209	3.0	9.6								
Day Chemigation (Drip System) Nontarpaulin	1408					16.5					
Day Chemigation (Drip System) Tarpaulin	1407				83.2						
Day Rotary Tiller	1409				16.8	83.5					
Nontarpaulin/Deep/ Broadcast or Bed	1206	97.0	55.7								
Tarpaulin/Deep/ Broadcast	1107			74.8							
Tarpaulin/Shallow/ Broadcast – Nobel Plow	1103		34.8	25.2							
Chemigation (Drip System)/Tarpaulin	1209	3.0	9.6								

Fumigation methods are described in detail in the memo Barry et al., 2007.

DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

<sup>&</sup>lt;sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

 $Table\ A1-24.\ 2008\ frequency\ of\ fumigation\ methods\ used\ (method\ use\ fractions)\ in\ the\ San\ Joaquin\ Valley\ nonattainment\ area.$ 

		% of Amount Applied						
Fumigation Method	Code	1,3-D	Chloro -picrin	Methyl Bromide	Metam Na	Metam K	Dazomet	Na Tetrathio- carbonate
Chemigation (Drip)	1601		•					97.1
Chemigation (mini- sprinkler)	1602							2.9
Day Chemigation (Drip System) Nontarpaulin	1408				1.3	10.5		
Day Chemigation (Drip System) Tarpaulin	1407				0.1	0.2		
Day Drench	1413					5.1		
Day Nontarpaulin/Shallow/ Broadcast or Bed /Two Water Treatments	1405				0.2			
Day Nontarpaulin/Shallow/ Broadcast or Bed/Three Water Treatments	1406				9.4	2.4		
Day Power Mulcher	1410				3.5	42.5		
Day Rotary Tiller	1409					5.2		
Day Soil Capping	1411				3.0	1.3		
Day Sprinkler/Broadcast or Bed/One Water Treatment	1401				1.4	7.6		
Day Sprinkler/Broadcast or Bed/Three Water Treatments	1403				14.3	0.7		
Day Sprinkler/Broadcast or Bed/Two Water Treatments	1402				7.7	7.1		
Day or Night Flood	1412							
Night 4 A.M. Start/Sprinkler/Broadc ast or Bed/Two Water treatments	1472							
Night Nontarpaulin/Shallow/ Broadcast or Bed/Two Water Treatments	1455				58.7	17.4		

Night Sprinkler/Broadcast or Bed/Two Water Treatments	1452				0.3		
Nontarpaulin/Deep/ Broadcast or Bed	1206	98.0	19.5				
Other label method - Methyl Bromide	1190		0.4	0.3			
Tarpaulin/Deep/Bed	1208	1.2					
Tarpaulin/Deep/ Broadcast	1207	0.9					
Tarpaulin/Shallow/ Broadcast – Nobel Plow	1103		80.1	99.7			

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 25. 2008 frequency of fumigation methods used (method use fractions) in the Southeast Desert nonattainment area.

				% (	of Amoun	t Applied	d	
Fumigation Method	Code	1,3-D	Chloro -picrin	Methyl Bromide	Metam Na	Metam K	Dazomet	Na Tetrathio- carbonate
Chemigation (Drip System)/Tarpaulin	1209	88.3	100.0					
Day Chemigation (Drip System) Nontarpaulin	1408				57.1			
Day Sprinkler/Broadcast or Bed/Three Water Treatments	1403				34.2			
Day Sprinkler/Broadcast or Bed/Two Water Treatments	1402				1.3			
Night 4 A.M. Start/Sprinkler/ Broadcast or Bed/Two Water treatments	1472				7.4			
Nontarpaulin/Deep/ Broadcast or Bed	1206	11.7						
Tarpaulin/Deep/ Broadcast	1107			37.4				
Tarpaulin/Shallow/Bed	1106							100.0

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup> DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.
<sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

Table A1 - 26. 2008 frequency of fumigation methods used (method use fractions) in the Ventura nonattainment area.

		% of Amount Applied							
Fumigation Method	Code	1,3-D	Chloro -picrin	Methyl Bromide	Metam Na	Metam K	Dazomet	Na Tetrathio- carbonate	
Chemigation (Drip System)/Tarpaulin	1209	99.5	89.1						
Chemigation (mini- sprinkler)	1602							100.0	
Day Chemigation (Drip System) Nontarpaulin	1408				0.2				
Day Chemigation (Drip System) Tarpaulin	1407				99.8	100.0			
Nontarpaulin/Deep/ Broadcast or Bed	1206	0.5	0.1						
Tarpaulin/Shallow/ Broadcast – Nobel Plow	1103		10.8	100.0					

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

Table A1 - 27. 2008 frequency of fumigation methods used (method use fractions) in the South Coast nonattainment area.

		% of Amount Applied						
Fumigation Method	Code	1,3-D	Chloro -picrin	Methyl Bromide	Metam Na	Metam K	Dazomet	Na Tetrathio- carbonate
Chemigation (Drip System)/Tarpaulin	1209	100.0	63.4					
Other label method - Methyl Bromide	1190		0.9	2.3				
Tarpaulin/Deep/ Broadcast	1107		0.5	4.8				
Tarpaulin/Shallow/ Broadcast – Nobel Plow	1103		35.2	92.9				

<sup>&</sup>lt;sup>1</sup> Fumigation methods are described in detail in the memo Barry et al., 2007.

<sup>&</sup>lt;sup>2</sup>DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

<sup>&</sup>lt;sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

<sup>&</sup>lt;sup>2</sup>DPR assumes 100% conversion of metam to MITC and percentages are relative to the amount of MITC applied.

<sup>&</sup>lt;sup>3</sup> DPR assumes 100% conversion of sodium (Na) tetrathiocarbonate to carbon disulfide and percentages are relative to the amount of carbon disulfide applied.

## California Department of Pesticide Regulation Volatile Organic Compound Regulations Field Fumigation Methods (FFM), FFM Code for Pesticide Use Reporting, and Emission ratings

Regulation Section	Field Fumigation Method	FFM Code	Emission Rating (%)
6447.3	Methyl Bromide Fumigation Methods (With or without chloropicrin)	1100 series	
6447.3(a)(1)	Nontarpaulin/Shallow/Bed	1101†	100*
6447.3(a)(2)	Nontarpaulin/Deep/Broadcast	1102	74*
6447.3(a)(3)	Tarpaulin/Shallow/Broadcast – Nobel Plow	1103	48
	Tarpaulin/Shallow/Broadcast – Nobel Plow – Strip	1104	74*
	Tarpaulin/Shallow/Broadcast – Closing shoes and compaction roller	1105†	100*
6447.3(a)(4)	Tarpaulin/Shallow/Bed	1106	100*
6447.3(a)(5)	Tarpaulin/Deep/Broadcast	1107	48
	Tarpaulin/Deep/Broadcast – Strip	1108	74*
6447.3(a)(6)	Drip System - Hot Gas	1109	100*
6447.3(a)(3)	Tarpaulin/Shallow/Broadcast – Nobel Plow–with tarp eligible for 60%	1143	48
	Tarpaulin/Shallow/Broadcast – Nobel Plow – Strip –with tarp eligible for 60% credit	1144	74*
	Tarpaulin/Shallow/Broadcast – Closing shoes and compaction roller—with tarp eligible for 60% credit	1145	100*
6447.3(a)(4)	Tarpaulin/Shallow/Bed –with tarp eligible for 60% credit	1146	100*
6447.3(a)(5)	Tarpaulin/Deep/Broadcast –with tarp eligible for 60% credit	1147	48
	Tarpaulin/Deep/Broadcast-Strip-with tarp eligible for 60% credit	1148	74*
6447.3(a)(6)	Drip System - Hot Gas –with tarp eligible for 60% credit	1149	100*
	Other label method for Methyl Bromide (with or without chloropicrin)**	1190	
6448.1	1,3-Dichloropropene Fumigation Methods (with or without chloropicrin)	1200 series	
6448.1(d)(1)	Nontarpaulin/Shallow/Broadcast or Bed	1201	65*
6448.1(d)(2)	Tarpaulin/Shallow/Broadcast	1202	65*
	Tarpaulin/Shallow/Bed	1203	65*
6448.1(d)(3)	Nontarpaulin/Shallow/Broadcast /Three Water Treatments	1204	44
6448.1(d)(4)	Tarpaulin/Shallow/Bed/Three Water Treatment	1205	44
6448.1(d)(5)	Nontarpaulin/Deep/Broadcast (without chloropicrin)	1206	26
	Nontarpaulin/Deep/Broadcast (with chloropicrin)	1206	64*
6448.1(d)(6)	Tarpaulin/Deep/Broadcast	1207	26
	Tarpaulin/Deep/Bed	1208	26
6448.1(d)(7)	Chemigation (Drip System)/Tarpaulin	1209	29

<sup>\*</sup> Method prohibited within the San Joaquin Valley, Southeast Desert, and Ventura nonattainment areas during May 1 – October 31.

<sup>\*\*</sup> For use only outside of the May 1 – October 31 time period: or areas outside of the nonattainment areas; or for exempted applications (such as described in Sections 6447, 6448, 6449, 6450, and 6451)

<sup>†</sup> Method no longer allowed. Codes are for applications that were made before 2015 when the method was allowed.

Regulation Section	Field Fumigation Method	FFM Code	Emission Rating (%)
6448.1(d)(5)	Nontarpaulin/Deep/Strip	1210	26
6448.1(d)(5)	Nontarpaulin/Deep/GPS-targeted	1211	26
6448.1(d)(2)	Tarpaulin/Shallow/Broadcast –with tarp eligible for 60% credit	1242	10
	Tarpaulin/Shallow/Bed-with tarp eligible for 60% credit	1243	65*
6448.1(d)(4)	Tarpaulin/Shallow/Bed/Three Water Treatment –with tarp eligible for	1245	44
6448.1(d)(6)	Tarpaulin/Deep/Broadcast –with tarp eligible for 60% credit	1247	10
	Tarpaulin/Deep/Bed-with tarp eligible for 60% credit	1248	26
6448.1(d)(6)	Tarpaulin/Deep/Broadcast-strip –with tarp eligible for 60% credit	1249	21
6448.1(d)(7)	Chemigation (Drip System)/Tarpaulin –with tarp eligible for 60% credit	1259	29
	Other label method for 1,3-Dichloropropene (with or without	1290	
6449.1	Chloropicrin-Fumigation Methods	1100-1300	
6447.3(a)(1)	Nontarpaulin/Shallow/Bed	1101†	64*
6447.3(a)(2)	Nontarpaulin/Deep/Broadcast	1102	64*
6447.3(a)(3)	Tarpaulin/Shallow/Broadcast – Nobel Plow	1103	44
	Tarpaulin/Shallow/Broadcast – Nobel Plow – Strip	1104	64*
	Tarpaulin/Shallow/Broadcast – Closing shoes and compaction roller	1105†	64*
6447.3(a)(4)	Tarpaulin/Shallow/Bed	1106	64*
6447.3(a)(5)	Tarpaulin/Deep/Broadcast	1107	44
	Tarpaulin/Deep/Broadcast – Strip	1108	64*
6447.3(a)(3)	Tarpaulin/Shallow/Broadcast – Nobel Plow–with tarp eligible for 60% credit	1143	7
	Tarpaulin/Shallow/Broadcast – Nobel Plow – Strip –with tarp eligible for 60% credit	1144	7
	Tarpaulin/Shallow/Broadcast – Closing shoes and compaction roller–with tarp eligible for 60% credit	1145†	7
6447.3(a)(4)	Tarpaulin/Shallow/Bed –with tarp eligible for 60% credit	1146	7
6447.3(a)(5)	Tarpaulin/Deep/Broadcast –with tarp eligible for 60% credit	1147	7
	Tarpaulin/Deep/Broadcast – Strip –with tarp eligible for 60% credit	1148	7
6448.1(d)(1)	Nontarpaulin/Shallow/Broadcast or Bed	1201	64*
6448.1(d)(2)	Tarpaulin/Shallow/Broadcast	1202	44
	Tarpaulin/Shallow/Bed	1203	64*
6448.1(d)(3)	Nontarpaulin/Shallow/Broadcast /Three Water Treatments	1204	43
6448.1(d)(4)	Tarpaulin/Shallow/Bed/Three Water Treatment	1205	43
6448.1(d)(5)	Nontarpaulin/Deep/Broadcast	1206	64*
6448.1(d)(6)	Tarpaulin/Deep/Broadcast	1207	44
	Tarpaulin/Deep/Bed	1208	44

<sup>\*</sup> Method prohibited within the San Joaquin Valley, Southeast Desert, and Ventura nonattainment areas during May 1 – October 31.

<sup>\*\*</sup> For use only outside of the May 1 – October 31 time period: or areas outside of the nonattainment areas; or for exempted applications (such as described in Sections 6447, 6448, 6449, 6450, and 6451)

<sup>†</sup> Method no longer allowed. Codes are for applications that were made before 2015 when the method was allowed.

Regulation Section	Field Fumigation Method	FFM Code	Emission Rating (%)
6448.1(d)(7)	Chemigation (Drip System)/Tarpaulin	1209	12
6448.1(d)(5)	Nontarpaulin/Deep/Broadcast/Strip	1210	64
6448.1(d)(5)	Nontarpaulin/Deep/Broadcast/GPS-targeted	1211	64
6448.1(d)(2)	Tarpaulin/Shallow/Broadcast –with tarp eligible for 60% credit	1242	7
	Tarpaulin/Shallow/Bed-with tarp eligible for 60% credit	1243	7
6448.1(d)(4)	Tarpaulin/Shallow/Bed/Three Water Treatment –with tarp eligible for 60% credit	1245	7
6448.1(d)(6)	Tarpaulin/Deep/Broadcast –with tarp eligible for 60% credit	1247	7
	Tarpaulin/Deep/Bed-with tarp eligible for 60% credit	1248	7
6448.1(d)(6)	Tarpaulin/Deep/Broadcast-strip –with tarp eligible for 60% credit	1249	7
6448.1(d)(7)	Chemigation (Drip System)/Tarpaulin –with tarp eligible for 60% credit	1259	7
	Other label method for Chloropicrin**	1390	
6450.1	Metam-Sodium and Metam-Potassium Fumigation Methods	1400 series	
6450.1(d)(1)	Sprinkler/Broadcast or Bed/One Water Treatment	1401	77*
6450.1(d)(2)	Sprinkler/Broadcast or Bed/Two Water Treatments	1402	28
6450.1(d)(3)	Sprinkler/Broadcast or Bed/Three Water Treatments	1403	21
6450.1(d)(4)	Nontarpaulin/Shallow/Broadcast or Bed/One Water Treatment	1404	77*
6450.1(d)(5)	Nontarpaulin/Shallow/Broadcast or Bed /Two Water Treatments	1405	28
6450.1(d)(6)	Nontarpaulin/Shallow/Broadcast or Bed/Three Water Treatments	1406	21
6450.1(d)(7)	Chemigation (Drip System) Tarpaulin	1407	9
	Chemigation (Drip System) Nontarpaulin	1408	9
6450.1(d)(8)	Rotary Tiller	1409	14
	Power Mulcher	1410	14
	Soil Capping	1411	14
6450.1(d)(9)	Flood	1412	77*
6450.1(d)(12)	Drench	1413	100
6450.1(d)(7)	Chemigation (Drip System) Tarpaulin –with tarp eligible for 30%	1447	9
6450.1(d)(2)	Night 1A.M. Start/Sprinkler/Broadcast or Bed/Two Water Treatments	1452	77*
6450.1(d)(10)	1A.M. Start/Nontarpaulin/Shallow/Broadcast or Bed/Two Water Treatments	1455	13
6450.1(d)(11)	4A.M. Start/sprinkler/Broadcast or Bed/Two Water Treatments	1472	35
	Other label method for Metam-Sodium and Metam-Potassium**	1490	

<sup>\*</sup> Method prohibited within the San Joaquin Valley, Southeast Desert, and Ventura nonattainment areas during May 1 – October 31.

<sup>\*\*</sup> For use only outside of the May 1 – October 31 time period: or areas outside of the nonattainment areas; or for exempted applications (such as described in Sections 6447, 6448, 6449, 6450, and 6451)

Regulation Section	Field Fumigation Method	FFM Code	Emission Rating (%)
6450.2	Dazomet Fumigation Methods	1500 series	
	Soil incorporation	1501	17
	Surface application – water incorporation	1502	17
	Other label method for Dazomet**	1590	
6451.1	Sodium Tetrathiocarbonate Fumigation Methods	1600 series	
	Chemigation (Drip)	1601	10
	Chemigation (mini-sprinkler)	1602	10
	Chemigation (flood, basin)	1603	10
	Chemigation (furrow, border)	1604	10
	Chemigation (foggers, jets, misters, other)	1605	10
	Other label method for Sodium Tetrathiocarbonate**	1690	
6446.1	Methyl Iodide Fumigation Methods	1700 Series	
	Day Tarpaulin/Shallow/Broadcast***	1701	100
	Day Tarpaulin/Shallow/Bed***	1702	100
	Day Tarpaulin/Deep/Broadcast***	1703	100
	Day Chemigation (Drip)/Tarpaulin***	1704	100
	Day Auger-Probe***	1705	100

<sup>\*\*</sup> For use only outside of the May 1 – October 31 time period: or areas outside of the nonattainment areas; or for exempted applications (such as described in Sections 6447, 6448, 6449, 6450, and 6451)

<sup>\*\*\*</sup>Methyl lodide is no longer registered. Codes are for applications that were made in 2011 when the chemical