


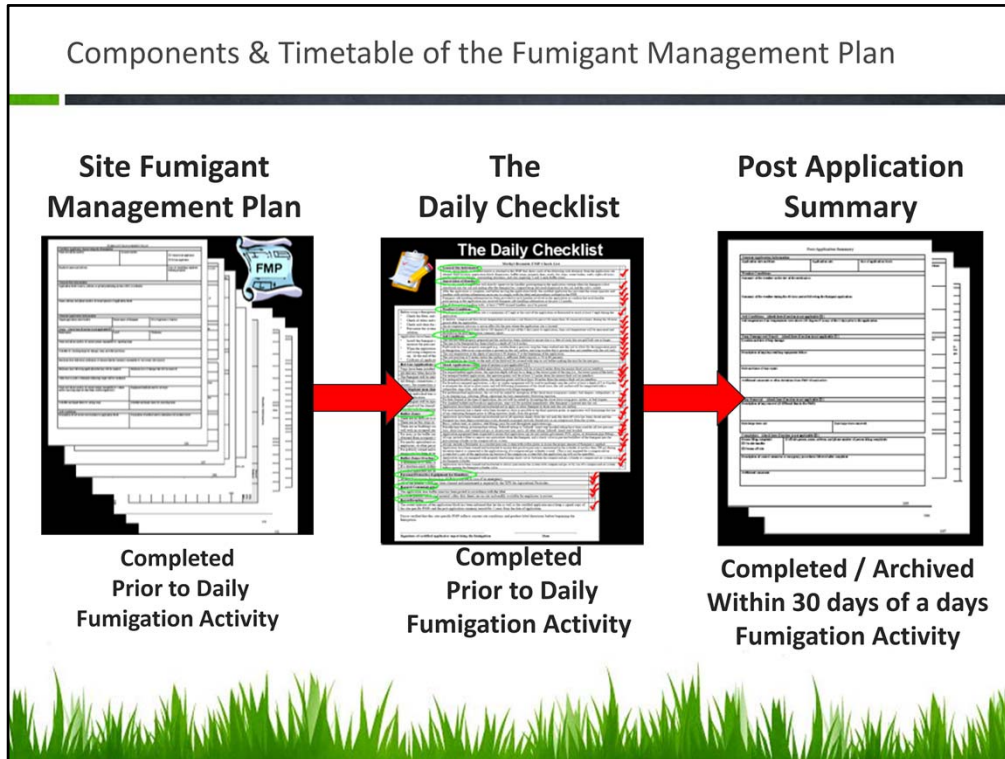


Welcome to Module 9, Fumigant Reregistration.



Daily Check List Post Application Summary

Today, we will discuss the daily check list and post application summary.



As indicated in previous modules, the Fumigant Management Plan consists of 3 Components, each of which have their own purpose, information requirement, and timeline for completion.

Overall, the Fumigant Management Plan consists of a :

- Site Specific Fumigant Management Plan
- A Daily Check list , and
- A Post Application Summary Report

The Site Specific Management Plan is completed daily, prior to each days fumigation in the field.

Once the Site Specific Management Plan is developed, The Daily Checklist, is then completed on a daily basis, prior to each days fumigation in the field.

Additionally, EPA requires that applicators complete a post-fumigation summary that described any problems which developed during or after fumigation, changes in conditions or deviations from the Fumigant Management Plan for that days fumigation activity. The Post Application summary is designed to include measurements taken to comply with GAPs, and information about any problems such as complaints or incidents that occurred as a result of the fumigation. The Post Application summary must be completed within 30 days of a given days fumigation activity

Daily Check List: Purpose

To verify that the site-specific FMP reflects current site conditions and product label directions before beginning each day's fumigation.

Should be signed, dated, and archived for 2 years

http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/fmp-for-2011.pdf

The purpose of the Daily Check List is to verify that the site-specific FMP reflects current site conditions and product label directions before beginning each days fumigation.

The Environmental Protection Agency, EPA, has developed a sample template in which many of the elements of the Fumigant Management plan are covered in checklist format, which fumigators have the option of downloading and modifying to meet the needs of an applicators specific fumigation situations. The EPA website for the Check List download appears at the bottom of the current slide. The current template outlines 10 different major categories and a list of 57 different elements or check boxes which applicators should consider prior to beginning a days fumigation activity.

Daily Check List

- ***Supervision of Handlers***
- ***Weather Conditions***
- ***Soil Conditions***
- ***Shank Applications***
 - *injection depth*
 - *soil sealing*
 - *equipment calibration*

http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/fmp-for-2011.pdf

The major components of the Daily Checklist includes a variety of different categories in which applicators are questioned and asked to check whether General site information has been completed and included within the Fumigant Management Plan, Whether guidelines for handler supervision are being met, whether proper soil and weather conditions will exist prior to starting a days fumigation, and whether proper injection depths, soil sealing, equipment calibration have been considered and necessary adjustment made to comply with any new label requirement. Again, the objective of the Daily checklist to ensure that the required information for these categories has been documented within the FMP prior to beginning the days fumigation.

Check List and Post Application Summary Reporting

Supervision of Handlers

Shank Applications (start to finish)

For all applications, except water run, (e.g., shank) from the start of the application until the fumigant has stopped being delivered/dispensed into the soil, i.e., after the soil is sealed, the certified applicator must be at the fumigation site and must directly supervise all persons performing handling activities.

Drip Applications

For water-run applications (e.g., drip), the certified applicator must be at the fumigation site to start the application including set-up, calibration, and initiation of the application. The certified applicator may leave the site but must return every two hours to visually inspect the equipment to ensure proper functioning and must directly supervise all WPS-trained handlers on-site until the fumigation has stopped being delivered/dispersed into the soil. WPS-trained handlers may perform the monitoring functions in place of the certified applicator but must be under the supervision of the certified applicator and be able to communicate with the certified applicator at all times during monitoring activities via cell phone or other means. The results of monitoring activities must be captured in the FMP's post-application summary report.

The daily checklist is a tool in which applicators are reminded and questioned to confirm whether applicators have overlooked any aspect of their new responsibilities and label obligations. For example, in the Supervision of Handler section of the Daily Checklist, the applicator is reminded and asked to confirm that an on site certified applicator for all shank applications will directly supervise the handlers participating in the application starting when the fumigant is first introduced into the soil and ending after the fumigant has stopped being delivered or dispensed into the soil and the soil is sealed.

For all water-run applications, such as with drip fumigation, the certified applicator must be at the fumigation site to start the application including set-up, calibration, and initiation of the fumigant injection and application process. The certified applicator may leave the site but must return every two hours to visually inspect the equipment to ensure proper functioning and must directly supervise all WPS-trained handlers on-site until the fumigation has stopped being delivered or dispersed into the soil. WPS-trained handlers may perform the monitoring functions in place of the certified applicator but must be under the supervision of the certified applicator and be able to communicate with the certified applicator at all times during monitoring activities via cell phone or other means. The results of monitoring activities must be captured in the FMP's post-application summary report.

Additional Training

- Fumigant-specific, product stewardship training for applicators at least every **36 months**.
- Additional Fumigant Safe Handling training information for handlers in the past **12 months**.

EPA has determined that Fumigant-specific training for applicators and additional training information for handlers will help reduce the magnitude and frequency of exposure incidents.

As a result, To complete the Fumigant Management Plan, and Daily Checklist, the certified applicator must document and is reminded to confirm that applicator training developed and provided for by individual fumigant registrants or from State approved training programs has been completed at least every 36 months, and that Fumigant safe handler training information has been provided to each handler prior to beginning a days application or to confirm that each handler in the field has received the Information in the past 12 months.



As a two page downloadable template, the major components of the Daily Checklist also includes categories in which applicators are questioned and asked to check whether proper maintenance of Application Equipment has been provided for, whether applicators have received newly mandated product stewardship training from the Registrant or other State Approved training programs, whether buffer zones distances have been calculated correctly, whether difficult to evacuate sites such as schools, nursing homes, and day care centers have been accounted in buffer zone calculations, and whether a minimum 12 hour period between ending one days application and beginning another has been met as a prerequisite for buffer zone overlap. The Daily check list is designed to confirm that applicators recognize label requirements for personal protective equipment, hazard communication, and posting of proper signage around the application block. Finally, the checklist reminds the applicator and or landowner / operator of the 2 year recordkeeping and archiving requirement for the Fumigant Management plan. Again, the objective of the Daily checklist to ensure that the required information for these categories has been documented within the FMP prior to beginning the days fumigation.

Post Application Summary (PAS)

Purpose

- Documents any deviations from the FMP
 - e.g., date of application, procedures, personnel, etc.
- Summary of actual weather, site conditions
- Measurements taken to comply with GAPs
- Description of problems or complaints
- Actual dates of tarp activities, sign removal, etc.
- PAS must be completed within 30 days of the application and kept with the FMP

FMP, Daily Checklist, and PAS templates are available for downloading and modification to meet the needs of an applicators specific fumigation situation. See http://www.epa.gov/pesticides/reregistration/soil_fumigants/
http://www.epa.gov/oppsrrd1/reregistration/soil_fumigants/fmp-for-2011.pdf

As indicated, EPA is requiring important new safety measures for use of any soil fumigant pesticide including new requirements for fumigant management plans (FMPs) and post-application summary reports. When the new fumigant labels appear in the marketplace, fumigators will need to ensure that a site-specific FMP is in place before beginning a fumigant application. They will also need to prepare a post-application summary report to document any deviations from the FMP that may have been necessary, as well as provide summaries of actual weather and soil conditions and measurements taken to comply with mandatory Good Agricultural Practices taken during and/or after the application. The new label requirements will also require applicators to provide description of problems or complaints, dates of tarping activities, field posting and dates of sign removal within the Post Application Summary report. The Post application summary is a mandatory new recordkeeping requirement which must be completed within 30 days of the application and kept with the fumigation management plan for that days application. Like the FMP and Daily Checklist, EPA have provided for applicator assistance in preparing these documents via a number of web sites in which templates and additional information is available for viewing and downloading for applicator use. The websites for these downloads are posted at the bottom of the current slide.

Post Application Summary

The image shows a sample of a 'Post Application Summary' form. The form is a multi-section document with various fields for data entry. A prominent red diagonal watermark is overlaid on the form, reading 'A simple day's fumigation activity focusing on Deviations from FMP'. The form includes sections for general information, application details, and monitoring results.

Completed / Archived
Within 30 days of a days
Fumigation Activity

Composed of 13 Sections:

- General Application Information
- Tarp Damage , Repair, Removal
- Soil Conditions
- Weather Conditions
- Complaints
- Emergency Response Measures
- Description of Incidents
- Elevated Air Concentrations
- Posting Signs
- Other
- When Respirator Protection Not in use:
 - was Sensory Irritation Experience? (Did you Cease operations or use Respirators)
- When Respiratory Protection is in Use:
(Provide Direct Instrument Air Monitoring Results)
- Sign and Date

In addition to the Site Specific Fumigant Management Plan, the new fumigant product labels will require certified applicators in charge of each days fumigation activity to complete a post-fumigation, post application summary for that days fumigation activity, describing any deviations from the FMP. The Post-Application Summary which must be signed, dated, and archived by the certified applicator for at least 2 years after application must contain the following components or information sections. These include general applicator and application information, measurements and reports of soil and weather conditions taken to comply with GAPs, The location and results of the air monitoring, and information about any problems such as complaints or incidents that occurred as a result of the fumigation must be recorded in the post-application summary report. The Post application summary must be completed within 30 days of any given days fumigation activity.

Post Application Summary	
General Application Information	
	Size of application block
Weather Conditions	
Summary of the weather on the day of the application:	
Summary of the weather during the 48-hour period following the fumigant application:	
Soil Conditions (check here if section is not applicable <input type="checkbox"/>)	
Soil temperature if no temperatures were above 100 degrees F in any of the 3 days prior to the application:	
Tarp Damage and Repair (check here if section is not applicable <input type="checkbox"/>)	
Location and size of tarp damage:	
Description of tarp/tarp seal/tarp equipment failure:	
Date and time of tarp repair:	
Additional comments or other deviations from FMP (if applicable):	
Tarp Removal (check here if section is not applicable <input type="checkbox"/>)	
Description of tarp removal (if different than in the FMP):	
Date tarps were removed:	
Complaints (check here if section is not applicable <input type="checkbox"/>)	
Person filing complaint: <input type="checkbox"/> On-site landfall, <input type="checkbox"/> Off-site person, name, address, and phone number of person filing complaint:	
Description of control measure or emergency procedure followed after complaint:	
Additional comments:	

Within 30 days: Describe any deviations from FMP

Weather Conditions

e.g., Unexpected Flooding rains


Soil Conditions

Tarp Damage & Repair

e.g., High winds Lifting mulch

Tarp Removal

Complaints & Emergency Procedures



To complete the Post Application Summary report, the certified applicator must accept a new responsibility and philosophy which requires the applicator to maintain a high level of organization and record keeping that may not have existed prior. To complete the Post Application Summary report will require the applicator to recall and to record day and period specific information about application procedures, changes in field conditions, and events which transpired during and after a specific fumigant application. The complexity and number of days spent fumigating in the field will determine the best record keeping strategy which applicators will need to preserve accurate accounts and records of each days fumigation and the post application period which follows.

In general, the Post Application Summary will require specific applicator and general application information, measurements and reports of soil and weather conditions taken to comply with GAPs For example, In the event of a change in weather or soil condition, the certified applicator must provide Summary of weather conditions on the day of the application and during the 48-hour period following the fumigant application to capture any deviations from the conditions reported within the fumigant management plan as it was originally developed.

Any unforeseen problems which occurred with tarp or plastic mulch installations, damage due to high winds or erosion, descriptions of the time, location, and severity of the problem must be provided, as well as times of tarp perforation or removal. The Post application summary must also provide description of any

complaints which may have been received, including the names, addresses, and phone numbers of the complaining parties.


Post Application Summary		
Description of Incidents (check here if section is not applicable <input type="checkbox"/>)		Date and time:
Description of emergency procedures followed:		
Additional comments:		
Elevated Air Concentration Levels (check here if section is not applicable <input type="checkbox"/>)		
<input type="checkbox"/> On-site	Location of elevated air concentration levels:	Date and time:
<input type="checkbox"/> Outside buffer zone		
Description of elevated air concentration levels: (provide air monitoring results on next page)		
Description of control measures or emergency procedures followed:		
Description of deviations from FMP (if applicable):		
Posting Signs		
Date of sign removal:		
Description of deviations from FMP (if applicable):		
Other		
Additional comments/notes:		

Within 30 days: Describe any deviations from FMP

Describe any incidents, complaints, or needs for Emergency Responses

Describe whether elevated Air Concentrations were observed
Describe emergency procedures followed

Describe the posting and removal of signs within the application block



As part of the Post Application Summary Reporting process, applicators are required to describe any incidents, complaints, or needs for emergency response and the procedures the applicator followed which were needed and implemented during the actual or post fumigant application period. Within the Post Application report, the applicator is also required to describe any situation in which elevated air concentrations were ever observed or detected on-site in the field or within the buffer zone? The applicator is also expected to address any deviations from the Fumigant Management Plan for that days fumigation to help define and explain why the elevated air concentrations were observed. The applicator must also provide a description of the posting and timely manner of removal of all buffer zone and treated area signs within the fumigant treated area.

Post Application Summary

Air Monitoring Results

When Respiratory Protection is Not in Use – Sensory Irritation Experienced (check here if section is not applicable ☐)					
Date and Time	Handler Task/Activity	Handler Location Where Irritation Was Observed	Reading Action	Comments	
			<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection		
			<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection		
			<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection		
			<input type="checkbox"/> Cease operations <input type="checkbox"/> Respiratory protection		

When Respiratory Protection is in Use – Direct Read Instrument Air Monitoring (check here if section is not applicable ☐)							
Sample Type	Sample Number	Sample Date/Time	Handler Task/Activity (not applicable for structural monitoring)	Handler Location/Structure Location	Air Concentration	Sampling Method	Comments (e.g., sensory irritation experienced while wearing respirator)
<input type="checkbox"/> Area							
<input type="checkbox"/> Breathing Zone							
<input type="checkbox"/> Structure							
<input type="checkbox"/> Area							
<input type="checkbox"/> Breathing Zone							
<input type="checkbox"/> Structure							
<input type="checkbox"/> Area							
<input type="checkbox"/> Breathing Zone							
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<input type="checkbox"/> Area							
<input type="checkbox"/> Breathing Zone							
<input type="checkbox"/> Structure							

I have verified that this post application summary reflects the actual site conditions during the fumigation and an accurate description of deviations from the FMP (if applicable).

Signature of certified applicator supervising the fumigation _____ Date _____

Air Monitoring Results

Sensory Irritation Experienced ?

Who, where, when, actions taken, Situational comments

Describe and report air monitoring results if Respirators were ever in use

Where, date, time, air concentration, Sampling method, situational comments

Sign, date, Archive for 2 years



As part of the Post Application Summary and as indicated in previous slides of this module, applicators must document whether sensory irritation was ever experienced by anyone in the field during the day of fumigation, including the time, location, and handler tasks being performed when the sensory irritation was observed. The certified applicator must also indicate in writing where and when any actions were taken. For example, the new fumigant labels demand that the applicator document whether the decision was made to cease operations and exit the field when sensory irritation is experienced by a handler in the field, or whether to place handlers in respirators and continue work in the field. Included within the Post application summary is a mandatory requirement of the certified applicator to report any air monitoring results when respirators were ever in use by handlers in the field. If at any time the person monitoring the air concentrations in the application block experiences sensory irritation when respirators are being worn, then the emergency response plan stated in the FMP must be immediately implemented, and the actions reported in the post application summary. Finally, the certified applicator responsible for supervising the fumigation applicator must sign and date the post application summary.

Post Application Summary

Record Keeping

- FMPs and Post-Application Summaries must be kept for 2 years by:
 - The supervising certified applicator and
 - The owner/operator (if not the certified applicator)
- Along with other records required for application of Restricted Use Pesticides
 - 7 code federal regulations 110

In addition to recordkeeping requirements from section 7 of the Code of Federal Regulations part 110 "Recordkeeping Requirements for Certified Applicators of Federally Restricted Use Pesticides," the new EPA label decisions for fumigant pesticides requires that both the applicator and owner/operator of the application block keep a signed copy of the site-specific FMPs and the post-application summary record for 2 years from the date of application.

The certified applicator shall also, upon oral request and presentation of credentials by an authorized representative, make both the FMP and PAS available upon request to federal, state, tribal, and local enforcement officials.

Post Application Summary – Concluding Remarks

- Completed within **30 days** of a day-specific fumigant application.
- The certified applicator supervising the application must describe:
 - Application block location, application method and rate of application
 - Any deviations from FMP that have occurred,
 - Weather and Soil Measurements taken to comply with mandatory GAP's
 - Description of any observed or reported complaints or accidents
 - Description of any incidents, equipment failure, or other emergency which occurred, and the emergency procedures that were followed
- The Post Application Summary must also include:
 - Description of any elevated concentrations of the fumigant and
 - Whether operations ceased, and handlers required to exit the field or
 - Whether handlers were required to wear respirators in the field
 - Results of any and all air monitoring of fumigant gases
- The owner/operator of the application block as well as the certified applicator must keep a signed copy of the site-specific FMP and the post application summary for **two years** from the date of application

In conclusion, Module number 9 has summarized major elements of the Daily Checklist and Post Application Summary. The daily checklist was described as a tool in which applicators are reminded and questioned to confirm whether applicators have properly planned for the days fumigant application and have not overlooked any aspect of their new responsibilities and label obligations. The post application summary report is now deemed a label requirement for use of all soil fumigant products. In general the Post Application Summary, is a report of a single days fumigation activity which must be completed and paired within 30 days with the corresponding site and day specific fumigant Management plan for that days fumigation activity.

In the report, The certified applicator supervising the application must describe:

Application block location, application method and rate of application and

Any deviations from FMP that have occurred,

A description of Weather and Soil Measurements taken to comply with mandatory GAP's must be included as well as a Description of any observed or reported complaints, accidents or incidents of equipment failure, or other emergency which occurred, and the emergency procedures that were followed

The Post Application Summary must also include:

Description of any elevated concentrations of the fumigant that may have been observed or detected and

Whether the applicator decide to cease operations and require handlers to exit the field or

Whether respirators were worn by handlers in the field, and if worn, to report the

Results of any and all air monitoring of fumigant gases in the field.

Finally, we have continued to reiterate that The certified applicator who supervised the fumigation and the owner/operator of the agricultural establishment where the fumigation took place must keep a signed copy of the site-specific FMPs and the post-application summary record for at least 2 years following the application and must make them available, upon request, to Federal, state, tribal, and/or local enforcement personnel."

Fumigant Management Plans (FMPs): Availability

The FMP must be available:

- For viewing on site by handlers involved in the days application
- To enforcement personnel, upon request
- To emergency response personnel, in case of an emergency

The FMP must be available:

- For viewing on site by handlers involved in the days application
- To enforcement personnel, upon request
- To emergency response personnel, in case of an emergency

Module 9 Review Questions

Questions

1. Which of the following must be completed within 30 days of fumigant application?

Which of the following must be completed within 30 days of fumigant application?

- Fumigant Management Plan
- They Daily Checklist
- Post Application Summary

Correct	Choice
	Fumigant Management Plan
	They Daily Checklist
X	Post Application Summary

2. The purpose of the Daily Checklist is to verify that the site-specific FMP reflects the current site conditions and product label directions _____ each day's fumigation.

The purpose of the Daily Checklist is to verify that the site-specific FMP reflects the current site conditions and product label directions _____ each day's fumigation.

- Before
- During
- After
- 2 weeks prior to

Correct	Choice
X	Before
	During
	After
	2 weeks prior to

3. The point of the Fumigant-specific training for applicators and additional training information for handlers is to help reduce the magnitude and frequency of exposure incidents.

The point of the Fumigant-specific training for applicators and additional training information for handlers is to help reduce the magnitude and frequency of exposure incidents.

True

False

Correct	Choice
X	True
	False

4. To complete the Fumigant Management Plan, the certified applicator must document that training developed and provided by individual fumigant registrants is completed every _____ months.

To complete the Fumigant Management Plan, the certified applicator must document that training developed and provided by individual fumigant registrants is completed every _____ months.

- 12
- 24
- 36
- 48

Correct	Choice
	12
	24
X	36
	48

5. When applying shank applications of fumigants, the certified applicator must be on site:

When applying shank applications of fumigants, the certified applicator must be on site:

- Only at the beginning to ensure proper application
- Only after the application to ensure no damage to tarps have occurred
- Only for the air monitoring after application
- from the start of the application until the fumigant has stopped being delivered

Correct	Choice
	Only at the beginning to ensure proper application
	Only after the application to ensure no damage to tarps have occurred
	Only for the air monitoring after application
X	from the start of the application until the fumigant has stopped being delivered

6. For drip applications, the certified applicator may leave the site but must return every hour to visually inspect the equipment to ensure proper functioning and must directly supervise all WPS-trained handlers on-site until the fumigation has stopped being delivered/dispersed into the soil.

For drip applications, the certified applicator may leave the site but must return every hour to visually inspect the equipment to ensure proper functioning and must directly supervise all WPS-trained handlers on-site until the fumigation has stopped being delivered/dispersed into the soil.

- True
- False

Correct	Choice
	True
X	False

7. The purpose of the Post Application Summary (PAS) is to document any deviations from the FMP.

The purpose of the Post Application Summary (PAS) is to document any deviations from the FMP.

True

False

Correct	Choice
X	True
	False

8. How long does the PAS and FMP need to be archived?

How long does the PAS and FMP need to be archived?

- 1 year
- 2 years
- 3 years
- 4 years

Correct	Choice
	1 year
X	2 years
	3 years
	4 years

9. Which of the following are included in the PAS (may select multiple answers)?

Which of the following are included in the PAS (may select multiple answers)?

- Tarp Damage , Repair, Removal
- Soil Conditions
- Elevated Air Concentrations
- Complaints
- Weather Conditions
- None of the options are included in the PAS

Correct	Choice
X	Tarp Damage , Repair, Removal
X	Soil Conditions
X	Elevated Air Concentrations
X	Complaints
X	Weather Conditions
	None of the options are included in the PAS

10. If a complaint is made such as experiencing a headache from exposure or dizziness, the Emergency Plan must be implemented and this must be documented in the PAS and how the plan was carried out.

If a complaint is made such as experiencing a headache from exposure or dizziness, the Emergency Plan must be implemented and this must be documented in the PAS and how the plan was carried out.

True

False

Correct	Choice
X	True
	False

11. If sensory irritation is experienced, what must be documented?

If sensory irritation is experienced, what must be documented?

- the person who experienced the sensory irritation should be documented, where the individual was at the time of the sensory irritation, and the actions taken by the certified applicator
- the person who experienced the sensory irritation including their address and contact information
- The information of the medical caretakers who addressed the issues including Paramedic License numbers or hospital information
- The situation that caused the gas levels to get unusually high

Correct	Choice
X	the person who experienced the sensory irritation should be documented, where the individual was at the time of the sensory irritation, and the actions taken by the certified applicator
	the person who experienced the sensory irritation including their address and contact information
	The information of the medical caretakers who addressed the issues including Paramedic License numbers or hospital information
	The situation that caused the gas levels to get unusually high

12. If requested by an enforcement official, the certified applicator does not have to provide the PAS or the FMP without an official citation or written request.

If requested by an enforcement official, the certified applicator does not have to provide the PAS or the FMP without an official citation or written request.

True

False

Correct	Choice
	True
X	False

13. If the certified applicator is not the producer, then the producer must also obtain a copy of the FMP and PAS for their records.

If the certified applicator is not the producer, then the producer must also obtain a copy of the FMP and PAS for their records.

True

False

Correct	Choice
X	True
	False