



City & Guilds NPTC Level 2 Award in The Safe Application of Pesticides, Mists, Fogs and Smokes (PA9) (601/5148/1)

Version 1.0 (February 2024)

Assessment Pack – Centre and Candidate Version

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1.0 February 2024	First version	All

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Introduction

This assessment relates to the unit in the Qualification handbook. The assessment can be achieved at pass only. If any task is not yet met the candidate is unsuccessful.

This assessment is for the following units and learning outcomes:

181 Applying pesticide mists, less than 100 microns VMD indoors covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to mixing and application
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the applicator
5. Be able to operate the applicator
6. Know how to carry out post-operational procedures

182 Applying pesticide mists, less than 100 microns VMD outdoors covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to mixing and application
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the applicator
5. Be able to operate the applicator
6. Know how to carry out post-operational procedures

183 Applying pesticide fogs, less than 100 microns VMD indoors covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to mixing and application
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the applicator
5. Be able to operate the applicator
6. Know how to carry out post-operational procedures

184 Applying pesticide smokes indoors covering the following learning outcomes:

1. Know the legislative and safety regulations relating to applicator use
2. Be able to assess the environmental factors relating to mixing and application
3. Be able to read and interpret product information
4. Be able to prepare and calibrate the applicator
5. Be able to carry out operational procedures safely
6. Know how to carry out post-operational procedures

General guidance on the requirements for assessment can be found in the Assessor Guidance General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site **www.nptc.org.uk**

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)

A prepopulated record of assessment must be completed by the assessor following an assessment. The number of outcomes is listed above, these must be ticked into the relevant met or not met sections of the ROA.

ARAS Forms

An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate is either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time

The expected assessment time for this qualification is 1.5 – 3 hours.

Summary of responsibilities in the assessment process		
Centre responsibilities	Candidate responsibilities	Assessor responsibilities
A suitable site is made available for the assessment to take place		Ensuring that the site provided is suitable for the assessment to take place
Machinery, equipment and materials are available to enable assessment of all the activities to take place	To be familiar with the machinery/equipment being used for the assessment	Ensuring that the machinery, equipment and materials provided satisfy the assessment requirements
	To bring appropriate Personal Protective Equipment (PPE) to the assessment	Ensuring that candidate's PPE complies with the requirements of the assessment
	To bring relevant training materials (including calibration sheet if applicable)	
	To bring a product label appropriate for the assessment	To ensure that the product label is appropriate for the assessment (or provide a suitable alternative)

This is not an open book assessment, however additional technical information may be sought from the relevant manufacturer's operator manuals or any other appropriate training or safety publication.

Practical observation descriptor table

Unit 181 Applying pesticide mists, less than 100 microns VMD indoors:

Activity number and description from check list		Assessment criteria
1.1	Describe the legal requirements relating to applying pesticides using misting equipment indoors	May include: <ul style="list-style-type: none">all required guards are in place and equipment complies with legal requirements

		<ul style="list-style-type: none"> • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply pesticides safely using misting equipment following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> • comply with relevant Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements • be aware of the increased risk of applying pesticides in a confined area
2.1	Identify risks to the environment	<p>May include:</p> <ul style="list-style-type: none"> • water course • drains • boreholes • wildlife • non-targets • sensitive crops/areas • housing • public/bystanders/co-workers • other risks specific to the site
2.2	Explain how to minimise risks to the environment	<p>Explanation to include the following points:</p> <ul style="list-style-type: none"> • use of an appropriate pesticide • careful timing of application • check and maintain application rate • close ventilation system • seal the building • display warning signs • integrity of the structure • inform neighbours before application <p>Check and comment on wind speed:</p> <ul style="list-style-type: none"> • use of anemometer at suitable height or visible signs • wind direction • effect of wind suction <p>Reasons for minimising off target application:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment
3.1 3.2	Read product information Interpret product information	<p>The following to be provided if applicable:</p> <ul style="list-style-type: none"> • product name

		<ul style="list-style-type: none"> • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments • specific product precautions/warnings • reduced volume applications (if applicable) • operator protection • environmental protection • restrictions on use <p>Target specific information:</p> <ul style="list-style-type: none"> • crop/target • dose rate • water volume • timing <p>Mixing and spraying:</p> <ul style="list-style-type: none"> • filling • recommended nozzle/diffuser • recommended pressure • additional label information • compatibility
4.1	Carry out pre use checks to the applicator	<p>May include:</p> <p>applicator components to be inspected for serviceability and contamination that may include:</p> <ul style="list-style-type: none"> • guards • tank • lid • hoses • connections • seals • on/off control • delivery tubes • straps • pump (visual assessment only) • power source • anti-vibration mounts <p>To include:</p> <ul style="list-style-type: none"> • applicator checked for leaks • any problems identified to be rectified if within operators level of responsibility and ability • condition confirmed as suitable for operation

4.2	Adjust settings appropriate to the application requirements	May include: <ul style="list-style-type: none"> • engine settings • appropriate nozzle/diffuser/baffle • flow rate setting
4.3	Calibrate the applicator and record relevant data	To include: <ul style="list-style-type: none"> • safe procedure • accurate measurement • accurate result Calibration data <ul style="list-style-type: none"> • applicator used • flow rate setting • walking speed/application time • nozzle/diffuser/baffle • water volume • dose rate
4.4	Measure the area/volume to be treated	To include: <ul style="list-style-type: none"> • accurate measurement of dimensions • safe procedures
4.5	Calculate the area or volume to be treated	To include: <ul style="list-style-type: none"> • accurate calculations
4.6	Calculate the quantities of pesticide and water required, if appropriate	To include: <ul style="list-style-type: none"> • amount of pesticide required for specified area/volume • amount of water required for specified area/volume • amount of pesticide required for full tank
5.1	Measure the required quantities and add to the applicator, or attach pesticide container	To include: <ul style="list-style-type: none"> • correct selection and use of PPE/RPE(as required by the product label, COSHH/Risk Assessment) • suitable site selected • fill following product recommendations and approved procedures • correct use of water supply • accurate measurement of pesticide • accurate measurement of water • avoidance of spillage or • attach pesticide container
5.2	Demonstrate safe and accurate application procedures	To include: <ul style="list-style-type: none"> • treatment area/volume clearly identified • walking speed maintained • accurate switch on/off points • accurate matching of bouts • obstacles dealt with correctly (if applicable)

		<ul style="list-style-type: none"> walking direction avoidance of off target contamination awareness of changing weather conditions and appropriate action taken (if applicable)
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product label and/or COSHH/Risk Assessment) safe exit route identified and used prevention of public / bystander contamination safe filling procedure avoidance of off target contamination avoidance of overdosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> accurate legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste materials	<p>Surplus concentrate pesticide</p> <ul style="list-style-type: none"> return to temporary mobile store return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> triple rinsed secure storage until disposal return to supplier collected by a licensed waste disposal contractor <p>Packaging:</p> <ul style="list-style-type: none"> thoroughly emptied secure storage until disposal collected by a licensed waste disposal contractor <p>Surplus dilute pesticide</p> <ul style="list-style-type: none"> back on to site as long as it is below the maximum dose rate use on another approved crop/target/plant material treated by specialist treatment facility on site (e.g. a lined bio bed) collected by a licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the applicator	<p>May include:</p> <ul style="list-style-type: none"> appropriate site

		<ul style="list-style-type: none"> thorough washing with water and suitable additive if recommended internal and external surfaces safe disposal of tank washings by approved methods thorough flushing of systems when cleaning should take place safe procedures followed
6.3	Describe the storage requirements for the applicator	<p>May include:</p> <ul style="list-style-type: none"> ensure the applicator is clean and dry inspect for wear and damage replace any worn or damaged parts ensure system is drained and any valves left in appropriate positions frost protection measures implemented lubricate as required store undercover and out of direct sunlight store in a secure area
6.4	Explain the procedures to make the area safe for re- entry	<p>May include:</p> <ul style="list-style-type: none"> ventilate area prior to re-entry re-entry interval removal of warning signs decontamination of non-target areas withholding period before sale or consumption manufacturers procedures followed

182 Applying pesticide mists, less than 100 microns VMD outdoors

1.1	Describe the legal requirements relating to applying pesticides using misting equipment outdoors	<p>May include:</p> <ul style="list-style-type: none"> all required guards are in place and equipment complies with legal requirements comply with all relevant road traffic regulations when operating or transporting on the public highway comply with The Plant Protection Products (Sustainable Use) Regulations 2012 the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply pesticides safely using misting equipment following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> comply with relevant Pesticide Codes of Practice

		<ul style="list-style-type: none"> • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements • be aware of the increased risk of applying pesticides as a mist in an outdoor environment
2.1	Identify risks to the environment	<p>May include:</p> <ul style="list-style-type: none"> • water courses • drains • boreholes • wildlife • non-targets • sensitive crops/areas • housing • public/bystanders/co-workers • other risks specific to the site
2.2	Explain how to minimise risks to the environment	<p>Explanation to include the following points:</p> <ul style="list-style-type: none"> • use of an appropriate pesticide • careful timing of application • check and maintain application rate • display warning signs • inform neighbours before application <p>Check and comment on wind speed</p> <ul style="list-style-type: none"> • use of anemometer at suitable height or visible signs • wind direction <p>Reasons for minimising off target application:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment
3.1 - 3.2	Read product information Interpret product information	<p>The following to be provided if applicable:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments • specific product precautions/warnings • reduced volume applications (if applicable) • operator protection • environmental protection • restrictions on use <p>Target specific information:</p>

		<ul style="list-style-type: none"> • crop/target • dose rate • water volume • timing <p>Mixing and spraying:</p> <ul style="list-style-type: none"> • filling • recommended nozzle/diffuser • recommended pressure • additional label information • compatibility
4.1	Carry out pre use checks to the applicator	<p>May include:</p> <ul style="list-style-type: none"> • applicator components to be inspected for serviceability and contamination that may include: <ul style="list-style-type: none"> • guards • tank • lid • hoses • connections • seals • on/off control • delivery tubes • straps • pump (visual assessment only) • power source • anti-vibration mounts <p>Part fill applicator:</p> <ul style="list-style-type: none"> • applicator checked for leaks • any problems identified to be rectified if within operators level of responsibility and ability • condition confirmed as suitable for operation
4.2	Adjust settings appropriate to the application requirements	<p>May include:</p> <ul style="list-style-type: none"> • engine settings • appropriate nozzle/diffuser/baffle • flow rate setting
4.3	Calibrate the applicator and record relevant data	<p>To include:</p> <ul style="list-style-type: none"> • safe procedure • accurate measurement • accurate result <p>Calibration data</p> <ul style="list-style-type: none"> • applicator used • flow rate setting • walking speed/application time • nozzle/diffuser/baffle • water volume

		<ul style="list-style-type: none"> dose rate
4.4	Measure the area/volume to be treated	To include: <ul style="list-style-type: none"> accurate measurement of dimensions safe procedures
4.5	Calculate the area or volume to be treated	To include: <ul style="list-style-type: none"> accurate calculations
4.6	Calculate the quantities of pesticide and water required, if appropriate	To include: <ul style="list-style-type: none"> amount of pesticide required for specified area/volume amount of water required for specified area/volume amount of pesticide required for full tank
5.1	Measure the required quantities and add to the applicator, or attach pesticide container	To include: <ul style="list-style-type: none"> correct selection and use of PPE/RPE (as required by the product label, COSHH/Risk Assessment) suitable site selected fill following product recommendations and approved procedures correct use of water supply accurate measurement of pesticide accurate measurement of water avoidance of spillage or attach pesticide container
5.2	Demonstrate safe and accurate application procedures	To include: <ul style="list-style-type: none"> treatment area/volume clearly identified walking speed maintained accurate switch on/off points accurate matching of bouts obstacles dealt with correctly (if applicable) walking direction avoidance of off target contamination awareness of changing weather conditions and appropriate action taken (if applicable)
5.3	Carry out all activities protecting human health and the environment	To include: <ul style="list-style-type: none"> prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product label and/or COSHH/Risk Assessment) prevention of public/bystander contamination safe filling procedure avoidance of off target contamination

		<ul style="list-style-type: none"> avoidance of overdosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> accurate legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste materials	<p>Surplus concentrate pesticide</p> <ul style="list-style-type: none"> return to temporary mobile store return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> triple rinsed secure storage until disposal return to supplier collected by a licensed waste disposal contractor <p>Packaging:</p> <ul style="list-style-type: none"> thoroughly emptied secure storage until disposal collected by a licensed waste disposal contractor <p>Surplus dilute pesticide</p> <ul style="list-style-type: none"> back on to site as long as it is below the maximum dose rate use on another approved crop/target/plant material treated by specialist treatment facility on site (e.g. a lined bio bed) collected by a licensed waste disposal contractor
6.2	Explain how to clean and decontaminate the applicator	<p>May include:</p> <ul style="list-style-type: none"> appropriate site thorough washing with water and suitable additive if recommended internal and external surfaces safe disposal of tank washings by approved methods thorough flushing of systems when cleaning should take place safe procedures followed
6.3	Describe the storage requirements for the applicator	<p>May include:</p> <ul style="list-style-type: none"> ensure the applicator is clean and dry inspect for wear and damage replace any worn or damaged parts ensure system is drained and any valves left in appropriate positions frost protection measures implemented lubricate as required

		<ul style="list-style-type: none"> • store undercover and out of direct sunlight • store in a secure area
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Unit 183 Applying pesticide fogs, less than 100 microns VMD indoors

1.1	Describe the legal requirements relating to applying pesticides using fogging equipment indoors	<p>May include:</p> <ul style="list-style-type: none"> • all required guards are in place and equipment complies with legal requirements • comply with all relevant road traffic regulations when operating or transporting on the public highway • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply pesticides safely using fogging equipment following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> • comply with relevant Pesticide Codes of Practice • adopt industry best practice • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements • be aware of the increased risk of applying pesticides in a confined area • awareness of potential fire hazards
2.1	Identify risks to the environment	<p>May include:</p> <ul style="list-style-type: none"> • water courses • drains • boreholes • wildlife • non-targets • sensitive crops/areas • housing • public/bystanders/co-workers • other risks specific to the site
2.2	Explain how to minimise risks to the environment	<p>Explanation to include the following points:</p> <ul style="list-style-type: none"> • use of an appropriate pesticide • careful timing of application • check and maintain application rate • identify safe exit route • close ventilation system • seal the building

		<ul style="list-style-type: none"> • display warning signs • integrity of the structure • inform neighbours before application <p>Check and comment on wind speed</p> <ul style="list-style-type: none"> • use of anemometer at suitable height or visible signs • wind direction • effect of wind suction <p>Reasons for minimising off target application:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment
3.1 - 3.2	<p>Read product information</p> <p>Interpret product information</p>	<p>The following to be provided if applicable:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments • specific product precautions/warnings • reduced volume applications (if applicable) • operator protection • environmental protection • restrictions on use <p>Target specific information:</p> <ul style="list-style-type: none"> • crop/target • dose rate • water volume • timing • additional label information • compatibility
4.1	Carry out pre use checks to the applicator	<p>May include:</p> <ul style="list-style-type: none"> • applicator components to be inspected for serviceability and contamination that may include: <ul style="list-style-type: none"> • read instructions • identify components including safety devices • condition of power source • re-fuelling procedure • security of packaging/canisters • contamination safety status • remedial action if appropriate <p>To include:</p>

		<ul style="list-style-type: none"> • applicator checked for leaks • any problems identified to be rectified if within operators level of responsibility and ability • condition confirmed as suitable for operation
4.2	Adjust settings appropriate to the application requirements	May include: <ul style="list-style-type: none"> • engine/power source settings • flow rate setting
4.3	Calibrate the applicator and record relevant data	To include: <ul style="list-style-type: none"> • safe procedure • accurate measurement • accurate result Calibration data <ul style="list-style-type: none"> • applicator used • flow rate setting • walking speed/application time • water volume • dose rate
4.4	Measure the area/volume to be treated	To include: <ul style="list-style-type: none"> • accurate measurement of dimensions • safe procedures
4.5	Calculate the weight, area or volume to be treated	To include: <ul style="list-style-type: none"> • accurate calculations
4.6	Calculate the quantities of pesticide and water required, if appropriate	To include: <ul style="list-style-type: none"> • amount of pesticide required for specified weight/area/volume • amount of water required for specified weight/area/volume • amount of pesticide required for full tank
5.1	Measure the required quantities and add to the applicator, or attach pesticide container	To include: <ul style="list-style-type: none"> • correct selection and use of PPE/RPE(as required by the product label, COSHH/Risk Assessment) • suitable site selected • fill following product recommendations and approved procedures • correct use of water supply • accurate measurement of pesticide • accurate measurement of water • avoidance of spillage or • attach pesticide container
5.2	Demonstrate safe and accurate application procedures	To include: <ul style="list-style-type: none"> • treatment area/volume/weight clearly identified • walking speed maintained

		<ul style="list-style-type: none"> • accurate switch on/off points • accurate matching of bouts • obstacles dealt with correctly (if applicable) • walking direction • avoidance of off target contamination • awareness of changing weather conditions and appropriate action taken (if applicable)
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product label and/or COSHH/Risk Assessment) • safe exit route identified and used • prevention of public / bystander contamination • safe filling procedure • avoidance of off target contamination • avoidance of overdosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste materials	<p>Surplus concentrate pesticide</p> <ul style="list-style-type: none"> • return to temporary mobile store • return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> • triple rinsed • secure storage until disposal • return to supplier • collected by licensed waste disposal contractor <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied • secure storage until disposal • collected by licensed waste disposal contractor <p>Surplus dilute pesticide</p> <ul style="list-style-type: none"> • back on to site as long as it is below the maximum dose rate • use on another approved crop/target/plant material • treated by specialist treatment facility on site (e.g. a lined bio bed) • collected by a licensed waste disposal contractor

6.2	Explain how to clean and decontaminate the applicator	<p>May include:</p> <ul style="list-style-type: none"> • appropriate site • thorough washing with water and suitable additive if recommended • internal and external surfaces • safe disposal of tank washings by approved methods • thorough flushing of systems • when cleaning should take place • safe procedures followed
6.3	Describe the storage requirements for the applicator	<p>May include:</p> <ul style="list-style-type: none"> • ensure the applicator is clean and dry • inspect for wear and damage • replace any worn or damaged parts • ensure system is drained and any valves left in appropriate positions • frost protection measures implemented • lubricate as required • store undercover and out of direct sunlight • store in a secure area
6.4	Explain the procedures to make the area safe for re-entry	<p>May include:</p> <ul style="list-style-type: none"> • ventilate area prior to re-entry • re-entry interval • removal of warning signs • decontamination of non-target areas • withholding period before sale or consumption • manufacturers procedures followed

Unit 184 Applying pesticide smokes indoors

1.1	Describe the legal requirements relating to applying pesticides using smokes indoors	<p>May include:</p> <ul style="list-style-type: none"> • equipment complies with legal requirements • comply with The Plant Protection Products (Sustainable Use) Regulations 2012 • the operator must hold the appropriate certification for the equipment they are using
1.2	Describe how to apply pesticides safely using smokes following industry best practice	<p>May include:</p> <ul style="list-style-type: none"> • comply with relevant Pesticide Codes of Practice • adopt industry best practice

		<ul style="list-style-type: none"> • be aware of any safety implications imposed by Risk/COSHH Assessment and comply with the requirements • be aware of the increased risk of applying pesticides in a confined area
2.1	Identify risks to the environment	<p>May include:</p> <ul style="list-style-type: none"> • water courses • drains • boreholes • wildlife • non-targets • sensitive crops/areas • housing • public/bystanders/co-workers • other risks specific to the site
2.2	Explain how to minimise risks to the environment	<p>Explanation to include the following points:</p> <ul style="list-style-type: none"> • use of an appropriate pesticide • careful timing of application • check and maintain application rate • close ventilation system • seal the building • display warning signs • integrity of the structure • inform neighbours before application <p>Check and comment on wind speed</p> <ul style="list-style-type: none"> • use of anemometer at suitable height or visible signs • wind direction • effect of wind suction <p>Reasons for minimising off target application:</p> <ul style="list-style-type: none"> • avoidance of contamination to people and the environment
3.1 3.2	Read product information Interpret product information	<p>The following to be provided if applicable:</p> <ul style="list-style-type: none"> • product name • active substance(s) (ingredient(s)) <p>Important information:</p> <ul style="list-style-type: none"> • field of use • crop/target • maximum individual dose • maximum total dose • maximum number of treatments • specific product precautions/warnings • operator protection • environmental protection • restrictions on use <p>Target specific information:</p>

		<ul style="list-style-type: none"> • crop/target • dose rate • timing • additional label information • compatibility
4.1	Calculate volume to be treated	<ul style="list-style-type: none"> • accurate calculations
4.2	Calculate the quantity of smoke generators or weight of pesticide product required	<ul style="list-style-type: none"> • accurate calculations
5.1	Measure out the required quantities and position the smoke generators or pesticide product	<p>To include:</p> <ul style="list-style-type: none"> • correct quantities • accurate placement • following label instructions • following risk assessment
5.2	Demonstrate safe and accurate operational procedures	<p>To include:</p> <ul style="list-style-type: none"> • appropriate PPE/RPE • direction of travel • safe system for the release of the pesticide product • safe exit route established
5.3	Carry out all activities protecting human health and the environment	<p>To include:</p> <ul style="list-style-type: none"> • prevention of personal injury and contamination through correct selection and use of PPE/RPE (as required by the product label and/or COSHH/Risk Assessment) • safe exit route identified and used • prevention of public / bystander contamination • safe filling procedure • avoidance of off target contamination • avoidance of overdosing crop/target/plant material
5.4	Complete a treatment record	<p>Completion of the treatment record must be:</p> <ul style="list-style-type: none"> • accurate • legible (if handwritten)
6.1	Explain how to manage surplus pesticide and dispose of waste materials	<p>Surplus concentrate pesticide</p> <ul style="list-style-type: none"> • return to temporary mobile store • return to fixed store <p>Containers:</p> <ul style="list-style-type: none"> • secure storage until disposal • return to supplier • collected by a licensed waste disposal contractor <p>Packaging:</p> <ul style="list-style-type: none"> • thoroughly emptied • secure storage until disposal

		<ul style="list-style-type: none"> collected by a licensed waste disposal contractor
6.2	Explain the procedures to make the area safe for re-entry	<p>May include:</p> <ul style="list-style-type: none"> ventilate area prior to re-entry re-entry interval removal of warning signs decontamination of non-target areas withholding period before sale or consumption manufacturers procedures followed

Appendix 1 Practical table

181 Applying pesticide mists, less than 100 microns VMD indoors

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using misting equipment indoors	
1.2 Describe how to apply pesticides safely using misting equipment following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimise risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the applicator	
4.2 Adjust settings appropriate to the application requirements	
4.3 Calibrate the applicator and record relevant data	
4.4 Measure the area/volume to be treated	
4.5 Calculate the area or volume to be treated	
4.6 Calculate the quantities of pesticide and water required, if appropriate	
5.1 Measure the required quantities and add to the applicator, or attach pesticide container	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste materials	
6.2 Explain how to clean and decontaminate the applicator	
6.3 Describe the storage requirements for the applicator	
6.4 Explain the procedures to make the area safe for re- entry	

Unit 182 Applying pesticide mists, less than 100 microns VMD outdoors

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using misting equipment outdoors	
1.2 Describe how to apply pesticides safely using misting equipment following industry best practice	

2.1 Identify risks to the environment	
2.2 Explain how to minimise risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the applicator	
4.2 Adjust settings appropriate to the application requirements	
4.3 Calibrate the applicator and record relevant data	
4.4 Measure the area/volume to be treated	
4.5 Calculate the area or volume to be treated	
4.6 Calculate the quantities of pesticide and water required, if appropriate	
5.1 Measure the required quantities and add to the applicator, or attach pesticide container	
5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste materials	
6.2 Explain how to clean and decontaminate the applicator	
6.3 Describe the storage requirements for the applicator	

Unit 183 Applying pesticide fogs, less than 100 microns VMD indoors

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using fogging equipment indoors	
1.2 Describe how to apply pesticides safely using fogging equipment following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimise risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Carry out pre use checks to the applicator	
4.2 Adjust settings appropriate to the application requirements	
4.3 Calibrate the applicator and record relevant data	
4.4 Measure the area/volume to be treated	
4.5 Calculate the weight, area or volume to be treated	
4.6 Calculate the quantities of pesticide and water required, if appropriate	
5.1 Measure the required quantities and add to the applicator, or attach pesticide container	

5.2 Demonstrate safe and accurate application procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste materials	
6.2 Explain how to clean and decontaminate the applicator	
6.3 Describe the storage requirements for the applicator	
6.4 Explain the procedures to make the area safe for re- entry	

Unit 184 Applying pesticide smokes indoors

All criteria must be achieved.

Activity number and description	Achieved
1.1 Describe the legal requirements relating to applying pesticides using smokes indoors	
1.2 Describe how to apply pesticides safely using smokes following industry best practice	
2.1 Identify risks to the environment	
2.2 Explain how to minimise risks to the environment	
3.1 Read product information	
3.2 Interpret product information	
4.1 Calculate volume to be treated	
4.2 Calculate the quantity of smoke generators or weight of pesticide product required	
5.1 Measure out the required quantities and position the smoke generators or pesticide product	
5.2 Demonstrate safe and accurate operational procedures	
5.3 Carry out all activities protecting human health and the environment	
5.4 Complete a treatment record	
6.1 Explain how to manage surplus pesticide and dispose of waste materials	
6.2 Explain the procedures to make the area safe for re-entry	

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to the **Centre Document Library** on www.cityandguilds.com or click on the links below:

Quality Assurance Standards: Centre Handbook

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on

- Centre quality assurance criteria and monitoring activities
- Administration and assessment systems
- Centre-facing support teams at City & Guilds / ILM
- Centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the Centre Contract.

Quality Assurance Standards: Centre Assessment

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements, or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre-assessments.

Access arrangements - When and how applications need to be made to City & Guilds

provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **Centre Document Library** also contains useful information on such things as:

- Conducting examinations
- Registering learners
- Appeals and malpractice

Useful contacts

Please visit the Contact Us section of the City & Guilds website, **Contact us**

About City & Guilds

As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

City & Guilds Group

The City & Guilds Group is a leader in global skills development. Our purpose is to help people, organisations and economies develop their skills for growth. We work with education providers, employers and governments in over 100 countries across the world to help people, businesses and economies grow by shaping skills systems and supporting skills development.

The Group is made up of City & Guilds, ILM, Kineo, The Oxford Group, Gen2, and Intertrain. Together we set the standard for professional and technical education and corporate learning and development around the world.

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City & Guilds of London Institute
Giltspur House
5-6 Giltspur Street
London
EC1A 9DE

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