



City & Guilds NPTC Level 2 Award in the Safe Use of Aluminium Phosphide for Vertebrate Pest Control (PA-AP) (601/2259/6)

Version 1.0 (February 2024)

Qualification Handbook

Qualification at a glance

Subject area	Pesticides
City & Guilds number	0216
Age group approved	16+
Entry requirements	Candidate must meet minimum age requirements.
Assessment	To gain this qualification, candidates must successfully achieve the following assessments: <ul style="list-style-type: none"> • One to one practical assessment with oral questioning by an NPTC City & Guilds approved assessor
Grading	Met/Not Met
Approvals	Full Centre approval required
Support materials	Qualification Handbook (candidates). Assessment materials (approved assessment Centres only).
Registration and certification	Consult the Walled Garden/Online Catalogue for last Registration and Certification dates.

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds NPTC Level 2 Award in the Safe Use of Aluminium Phosphide for Vertebrate Pest Control (PA2)	0216-26	601/2259/6	56	60

Version and date	Change detail	Section
1.0 February 2024	Initial version	All

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Introduction

This document tells you what you need to do to deliver the City & Guilds NPTC Level 2 Award in the Safe Use of Aluminium Phosphide for Vertebrate Pest Control (0216-26)

Area	Description
Who is the qualification for?	<p>This is an Independently Assessed qualification (PA-AP)</p> <p>Type of Learner: If your job involves applying pesticides in a commercial role then you are legally required by the Plant Protection Products (Sustainable Use) Regulations (2012) to take this qualification.</p> <p>Qualification Overview: This qualification is designed specifically for anyone who applies Aluminium Phosphide as part of their daily role. This will supersede award 009802.</p> <p>What you need to do: Candidates to undertake an oral and practical assessment.</p>
What does the qualification cover?	<p>This qualification covers the requirements for the safe use of aluminium phosphide for vertebrate pest control.</p> <p>Please refer to the Qualification Handbook for more detail.</p>
What opportunities for progression are there?	<p>Recommended progression onto 0216-63 – City & Guilds Level 3 Award in Responsible Pesticide Management.</p> <p>Once a candidate has successfully completed this qualification, they are able to legally apply pesticides using the methods and equipment identified within this qualification.</p>

Area	Description
Who did we develop the qualification with?	Developed with the Health and Safety Executive, Chemical Regulation Division, Voluntary Initiative and practicing industry stakeholders, DEFRA, Environment Agency.

Is it part of an apprenticeship framework or initiative?	No
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Assessment Guidance for the Candidate

A list of registered Assessment Centres is available from City & Guilds NPTC.
(www.nptc.org.uk)

Assessment is a process by which it is confirmed that the candidate is competent in the unit(s) within the award to which the assessment relates. It is the process of collecting evidence about the candidates capabilities and judging whether that evidence is sufficient to attribute competence.

The Candidate must be registered through the City & Guilds approved Assessment Centre for this qualification prior to the assessment.

Structure

To achieve the City & Guilds NPTC Level 2 Award in the Safe Use of Aluminium Phosphide for Vertebrate Pest Control (0216-26) learners must achieve both mandatory units:

City & Guilds unit number	Unit title	GLH
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Mandatory units:

Learners must achieve **both** mandatory units.

261	The principles of using aluminium phosphide for vertebrate pest control	28
262	The practices of using aluminium phosphide for vertebrate pest control	28

Total Qualification Time (TQT)

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT comprises of the following two elements:

- 1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
- 2) an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by – but, unlike guided learning, not under the immediate guidance or supervision of – a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds NPTC Level 2 Award in the Safe Use of Aluminium Phosphide for Vertebrate Pest Control (0216-2)	56	60

1 Centre requirements

Approval

Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document **Centre Approval process: Quality Standards** for further information. Please email **qasupport@cityandguilds.com** for further information on the approval process.

Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following requirements:

- be technically competent in the areas in which they are delivering
- be able to deliver across the breadth and depth of the content of the qualification being taught
- have recent relevant teaching and assessment experience in the specific area they will be teaching, or be working towards this
- demonstrate continuing CPD.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before delivering a course programme.

Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessments.

Assessment Guidance for the Assessor

Staff assessing these qualifications must be approved Certificate of Competence City & Guilds NPTC Assessors and must be independent and cannot have been involved with the training of the Candidate. This qualification can only be assessed by an Assessor who is suitably qualified and meets the requirements of the awarding body.

Certificate of Competence City & Guilds NPTC Assessors must meet the following requirements:

- show competence and provide evidence of industry expertise in the qualification/s they wish to assess
- hold the qualification as a candidate and have been technically evaluated as an Assessor
- be up to date with their verification and relevant first aid
- demonstrate continuing technically relevant CPD Compliance with these requirements is a pre-requisite for Assessors remaining on the list of approved Assessors.

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way City & Guilds has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in terms of both credibility and cost effectiveness and approved Assessors will be subject to a regular visit by the Verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the Assessor will be evaluated by a City & Guilds approved Quality Consultant.

Safe Practice

Appropriate PPE must be worn at all times All equipment must be operated in such a way that the Candidate, Assessor, other persons, animals or other equipment are not endangered.

If these conditions are not observed this will result in the Candidate not meeting the required standard.

Validation of Equipment

Any item(s) equipment used for the assessment must comply with current legal requirements.

Additional information may be sought from the relevant manufacturer's instruction book, operators' manual, product label/database or any other Government/Government Agency publication.

Appeals and Equal opportunities

Centres must have their own auditable, appeals procedures. If a Candidate is not satisfied with the examination conditions or a Candidate feels the opportunity for examination is being denied, the Centre Manager should, in the first instance, address the problem. If, however the problem cannot be resolved, City & Guilds will arbitrate and a Principal Verifier may be approached to offer independent advice.

All appeals must be clearly documented by the Centre Manager and made available to the Principal Verifier or City & Guilds if advice is required.

Should occasions arise when Centres are not satisfied with any aspect of the verification process, they should contact the Quality Assurance Manager at City & Guilds NPTC, 5-6 Giltspur Street, London, EC1A 9DE, UK. Access to the qualification is open to all, irrespective of gender, race, creed or special needs. Subject to H&S restrictions the Centre Manager should ensure that no learner is subjected to unfair discrimination on any grounds in relation to access to assessment and to the fairness of the assessment. QCA requires City & Guilds to monitor centres to check whether equal opportunities policies are being adhered to.

Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City and Guilds Quality Assurance processes visit: the [What is CASS?](#) and [Quality Assurance Standards](#) documents on the City & Guilds website.

Learner entry requirements

Candidate must meet minimum age requirements.

Age restrictions

This qualification is approved for learners aged 16 or above.

Access arrangements and reasonable adjustments

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on the City & Guilds website:

<http://www.cityandguilds.com/delivering-our-qualifications/centre-development/centre-document-library/policies-and-procedures/access-arrangements-reasonable-adjustments>

2 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualification.
- any units they have already completed or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme so the learner fully understands the requirements of the qualification, their responsibilities as a learner and the responsibilities of the centre. This information can be recorded on a learning contract.

Support materials

The following resources are available for this qualification:

Description	How to access
Candidate Handbook	www.nptc.org.uk
Assessment Pack (available only to assessors)	www.nptc.org.uk

3 Assessment

Assessment of the qualification

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
261	The principles of using aluminium phosphide for vertebrate pest control	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk
262	The practices of using aluminium phosphide for vertebrate pest control	Practical observations with oral questioning. Centres may use the materials provided by City & Guilds.	www.nptc.org.uk

Assessment strategy

City & Guilds has written the practical observations with oral questioning for each optional unit to use with this qualification, live assessment materials can be downloaded by the assessor via the Assessment Pack from the NPTC website.

Time constraints

The following must be applied to the assessment of this qualification:

Candidates must finish their assessment within 24 months of date of initial registration.

Assessments should take no longer than 1.5 – 3 hours.

Qualification registration is valid for two years.

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)

4 Units

Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- unit aim
- assessment type
- learning outcomes, which are comprised of a number of assessment criteria

Guidance for delivery of the units

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into **learning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

Unit 261

The principles of using aluminium phosphide for vertebrate pest control

Level:	2
GLH:	28
Assessment type:	Written and online assessment activities.
Aim:	The aim of this unit is for the candidate to show knowledge of the requirements for the safe use of aluminium phosphide for vertebrate pest control.

Learning outcome

The learner will:

- LO1 Know the legislative requirements and codes of practice relating to the use of Aluminium Phosphide (**Criteria 1.1 – 1.2**)

Assessment criteria

The learner can:

AC1.1 State an operators responsibilities under current legislation relating to the use of Aluminium Phosphide

AC1.2 State an operators responsibilities under current codes of practice relating to the use of Aluminium Phosphide

Topic 1.1

Operators responsibilities:

- take reasonable care of him/herself
- take care of others
- co-operate with employer
- follow employer's requirements

COSHH regulations

- operators to follow the COSHH/Risk Assessment
- use the control measures as provided
- check that control measures are working
- report any defects promptly
- use the provided Personal Protective Equipment (PPE)

- use the provided Respiratory Protective Equipment (RPE)

Measures required for COSHH

Hazards:

- harmful
- toxic
- flammable

Risks:

- Exposure to Phosphine gas (causing unconsciousness or death)
- spontaneous combustion
- activated by damp or wet conditions

Control measures:

- keep in original container until ready to apply
- use correct applicator
- follow COSHH/Risk Assessment
- use correct PPE/RPE
- avoid using in damp or wet conditions
- avoid risks to third parties by using exclusion zones/warning signs
- ensure that lone working procedures are in place
- ensure that emergency procedures are in place
- treated area to be monitored after application

Part III of the Food and Environmental Protection Act 1985:

- protect the health of human beings, creatures and plants
- only use humane methods of pest control
- safeguard the environment
- prevent the pollution of water
- make information available to the public

Plant Protection Products (Sustainable Use)

Regulations 2012

May include:

- all statutory conditions must be complied with
- all products must be approved for the intended use
- product labels and data sheets must be read and complied with
- maximum dose rates must be complied with
- take all reasonable precautions to protect the health of human beings, creatures and all the environment
- have had adequate instructions, training and guidance
- achieved City & Guilds appropriate qualification
- comply with the Plant Protection Products (Sustainable Use) Regulations 2012

Poisons Act 1972

- seller must identify purchaser
- purchaser must provide verification if not known to seller
- signed order accepted if purchaser cannot collect, detailing:
 - name and address of purchaser
 - trade, business or profession
 - total quantity

- establish purpose for use
- complete the poisons book
- rules for wholesaling

Wildlife & Countryside Act 1981

- knowledge of which species can be treated legally (under the Wildlife and Countryside Act 1981)
- signs of non target wild species
- knowledge of how to recognise signs of activity
- ability to carry out an Environmental Risk Assessment and site survey to determine risks and pest level
- wildlife habitat protection

Foxes:

- principal features of a fox earth
- fox signs, paw prints, hairs, droppings, scent
- fox specific habits

Badgers:

- legal position regarding the protection of the badger
- legal position regarding the protection of the badger sett
- principal features of the badger sett
- badger signs, tracks, hair, dropping, scents
- badger specific habits

Species may also include:

- other mammals (Pine Marten, Water Vole)
- birds living in burrows (Puffins, Shearwater)
- amphibians
- reptiles
- domestic animals and farm animals

Sites may include:

- identification of protected sites e.g. SSSI (Sites of Special Scientific Interest)
- SCA (Special Conservation Areas)

Prohibiting rabbit control

May include:

- Skokholm Island
- Isles of Scilly
- one square mile in the centre of London

Topic 1.2

Use of Aluminium Phosphide may include:

- reporting of incidents involving wildlife except fish
- (WIIS) Wildlife Incident Investigation Scheme
- reporting incidents involving fish to the Environment Agency
- abide by the static and mobile storage guidance laid out in HSE information sheet AIS16 & AIS22
- always transport Aluminium Phosphide as stated on the label
- always follow requirements relating to container

Best practice may include:

- lone working procedures to be in place
- operations with a buddy system preferred

Aluminium Phosphide packaging:

- must be correctly labelled
- must be undamaged
- must show batch numbers/tracking numbers
- must remain sealed up to the point of use
- UN approved packaging
- must be securely attached to the appropriate applicator

Learning outcome

The learner will:

LO2 Understand the relevance of product label information (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 State the relevance of product label information.

AC 2.2 Explain how the product must be used

Topic 2.1-2.2

May include:

- the statutory status of the label
- the significance of the important information section
- the product being used
- approval number
- active ingredient
- approved field of use
- the target species on which the product can be used
- specific product precautions
- approved directions for use
- use the correct applicator for the product
- application timing and guidance
- application rate
- PPE to be used
- RPE to be used
- first aid information
- additional information

Learning outcome

The learner will:

LO3 Understand how to minimise the risk of human contamination and implement emergency procedures (**Criteria 3.1 – 3.5**)

Assessment criteria

The learner can:

AC3.1 State possible routes of contamination

AC3.2 List appropriate Personal Protective Equipment (PPE)

AC3.3 Describe the symptoms of contamination

AC3.4 Explain appropriate procedures for dealing with contamination

AC3.5 Describe how to deal with an accidental spillage resulting in the liberation of gas

Topic 3.1

To include:

- absorption
- inhalation
- ingestion

May include:

- no eating drinking or smoking
- maintain personal hygiene
- never inhale or swallow any gassing compounds
- Personal Protective Equipment (PPE) to be suitable and serviceable
- check the operational life of filters
- store PPE and RPE safely and away from contamination
- dispose of PPE and RPE safely
- apply only with the correct applicator
- only to be applied outdoors
- Establish a risk area 25m from the treatment area and monitor for phosphine at the edge of the risk area. Risk area can be reduced to within 10m of the treatment area if phosphine is not detected
- not to be used either within 10m distance from buildings habituated by man or animals or within the established risk area
- knowledge that gas is present for 24/48 hours from becoming active
- do not use in rain, heavy mist or on waterlogged ground
- safety notices and exclusion areas

Topic 3.2

May include:

- coveralls

- suitable gloves
- appropriate footwear
- appropriate types of respirators (full face or hood types only)
- RPE filters B1 or B2 plus P3 for particulates
- use hood type RPE for operators with facial hair and glasses

Topic 3.3

May include:

- nausea
- vomiting
- headache
- dizziness
- finger tingling
- weakness
- faintness
- chest pains/tightness
- coughing
- difficulty in breathing

Topic 3.4

May include:

- protect self first (RPE)
- use of 999 and 112 for emergency contact
- relay accurate information to Emergency Services
- remove contaminated clothing
- contact the National Poisons Information Services (NPIS) via the NHS on 111

Identify first aid to measures to include:

- remove from the source of contamination
- airway clear
- treat as an emergency
- stay with the casualty
- do not perform mouth to mouth resuscitation

Topic 3.5

Dealing with an accidental spillage to include:

- evacuate area
- wear appropriate RPE
- appropriate method to clear up spillage referring to manufacturer's label
- bury at location (includes holes and burrow)
- know the location of spillage/grid reference
- inform Environment Agency and other relevant authorities (if over the normal application rates)

Learning outcome

The learner will:

LO4 Know how to store and transport Aluminium Phosphide safely (**Criteria 4.1 – 4.2**)

Assessment criteria

The learner can:

AC4.1 State how Aluminium Phosphide should be stored

AC4.2 State how Aluminium Phosphide should be transported

Topic 4.1

Requirements for safe storage may include:

- appropriate warning signs
- visible contact number for storage ownership
- storage recording system
- fixed location storage conditions, stored off the floor above a bund in a separate moisture proof and fire proof chest, bin or vault fixed to the wall of the store
- the storage container should be marked 'Gassing Compound: Do not use water'
- should be kept locked and key only accessible to those approved to use the product
- ensure correct firefighting equipment in store (dry powder extinguishers)
- correct PPE and RPE to be available

Topic 4.2

Requirements for safe transportation may include:

- appropriate warning signs
- precautions and documentation during transport
- products to be segregated from people during transport
- should always be stored in vapour proof container separated from cab or in container on external body of vehicle
- product records required in case of emergency
- never carry part used flasks
- ensure correct safety (RPE) equipment is in vehicle cab away from the product

Learning outcome

The learner will:

LO5 Know how to manage and dispose of surplus Aluminium Phosphide and waste materials (**Criteria 5.1 – 5.3**)

Assessment criteria

The learner can:

AC5.1 State appropriate methods of reducing waste

AC5.2 State how to manage and dispose of surplus Aluminium Phosphid

AC5.3 State how to manage and dispose of waste materials

Topic 5.1

- check site prior to operation
- check weather forecast prior to treatment
- ensure rabbits/rats/moles are below ground
- check amount dispensed
- ensure effective liaison with the stopper operator
- ensure all holes covered to prevent gas escape

Topic 5.2

Disposal methods could include:

- there should be no excess pesticides when using Phosphine releasing products (product should be used on a job by job basis)
- if the treatment does not require a full flask another treatment process should be selected in accordance with the COSHH/Risk Assessment
- if there is any excess pesticide remaining after application, it should be buried according to the instructions on the label and safety provisions put in place for 48 hours

Topic 5.3

Disposal methods could include:

- tap any remaining residue out of container and applicator at treatment burrow and vent the container thoroughly on site
- always dispose of the container according to the label (recycling not acceptable)
- container disposal via a licensed waste disposal contractor with consignment note
- consignment note to be retained by operator/company
- refer to RAMPS Code of Practice

Learning outcome

The learner will:

LO6 Know the record keeping requirements (**Criteria 6.1 – 6.1**)

Assessment criteria

The learner can:

AC6.1 State the records required to comply with legislation and best practice

Topic 6.1

Records to include:

- training records
- Environmental Assessment
- Risk Assessment

- COSHH Assessments
- control and emergency procedures
- stock records
- PPE and RPE stock numbers and equipment maintenance checks
- name and signature of the person carrying out the equipment inspection
- application records

Learning outcome

The learner will:

LO7 Understand how to minimise the risk of environmental contamination and implement emergency procedures (**Criteria 7.1 – 7.3**)

Assessment criteria

The learner can:

AC7.1 Describe risks to the environment from Aluminium Phosphide

AC7.2 Describe how to carry out Aluminium Phosphide application to minimise the risk to the environment

AC7.3 Explain appropriate procedures for dealing with environmental contamination

Topic 7.1

Risks to include:

- contamination of non-target species
- uncontrolled product liberation
- operator not aware of the 'Risk Area'
- application within 10 metres of a building occupied by humans or animals or within the established risk areas

Topic 7.2

Methods to include:

- complete a detailed site survey
- read and follow the product label
- follow the Environmental Assessment
- use the correct application equipment
- apply in suitable weather conditions

Topic 7.3

Procedures could include:

- top application
- secure the area
- contact Wildlife Incident Investigation Scheme (WIIS)
- contact the Emergency Services
- contact the Environment Agency

Unit 262 The practices of using aluminium phosphide for vertebrate pest control

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

Unit 261

The principles of using aluminium phosphide for vertebrate pest control

Level:	2
GLH:	28
Assessment type:	Practical activities with oral assessment.
Aim:	The aim of this unit is for the candidate to demonstrate safe handling of Aluminium Phosphide as used in pest control.

Learning outcome

The learner will:

LO1 Be able to comply with the legislative and safety regulations relating to applicator use
(Criteria 1.1 – 1.2)

Assessment criteria

The learner can:

AC1.1 Comply with the legal requirements relating to Aluminium Phosphide when using the application equipment

AC1.2 Apply Aluminium Phosphide safely using the correct equipment following industry best practice

Topic 1.1

To include:

- legal requirements followed
- application equipment used correctly
- comply with The Plant Protection Products (Sustainable Use) Regulations 2012
- the operator must hold the appropriate certification for the equipment they are using

Topic 1.2

To include:

- comply with Pesticide Codes of Practice

- adopt industry best practice
- apply Aluminium Phosphide safely
- use the correct equipment

Learning outcome

The learner will:

LO2 Be able to assess the environmental factors relating to application (**Criteria 2.1 – 2.2**)

Assessment criteria

The learner can:

AC2.1 Identify risks to the environment by completing an environmental risk assessment

AC2.2 Explain how to minimize risks to the environment

Topic 2.1

May include:

- ground conditions
- water courses
- environmental margins/strips/areas
- drains
- boreholes
- wildlife
- housing
- public access
- the impact of wet weather with product
- wind speed
- wind direction
- type of soil
- moisture content of soil
- other risks particular to the site

Risk area is:

- the area of possible danger around the fumigation area and out to a defined boundary where phosphine gas may be detected
- the risk area must be established at least 25 metres from the edge of the Fumigation area if it can be ensured by operational means that no person, farm or domestic animal will be present within this distance

Distance of the risk area from the fumigation area is established:

- the concentration of phosphine outside of this risk area must be below 0.01ppm and re-entry of persons into this risk area other than by the operator can only be permitted

once clearance is granted by the operator and the concentration of phosphine is below 0.01ppm

Areas where treatments of Aluminium Phosphide gas are not permitted

- under no circumstances can treatments be conducted if the intended fumigation area is within 10 metres of surface watercourses, ditches, human habitation or any non-target burrows, farm or domestic animal habitation

Suitable areas must include:

- correct identification of the risk area
- mark out from the outer edge of the fumigation area to a distance of 25m in 5m spaces and in 4 different directions to quarter the area. A total of 20 markers
- take two gas readings at each of these markers one 10cm above the ground and one at head height using suitable equipment to establish the gas levels
- the risk area may only be reduced if it does not contain any readings above 0.01ppm
- The risk area cannot be reduced to less than 10m from the fumigation area
- if any readings exceed 0.01ppm then the risk area must be extended beyond this point

Topic 2.2

Methods to include:

- complete a detailed site survey
- check and maintain application rate
- use an appropriate pesticide
- careful timing of application
- comply with Environmental Assessment
- erect warning signs
- set up exclusion zones
- gas monitoring
- read and follow the product label
- use the correct application equipment
- apply in suitable weather conditions

Learning outcome

The learner will:

LO3 Know the characteristics of the species to be controlled and their impact on the environment (**Criteria 3.1 – 3.5**)

Assessment criteria

The learner can:

AC3.1 Discuss the biology of the target species

AC3.2 Describe the feeding behaviour of the target species

AC3.3 Describe the activity patterns of the target species

AC3.4 State where damage may be caused by the target species

AC3.5 State the possible implications of the damage caused by the target species

Topic 3.1

May include:

Rats:

- litter size (approx 8)
- breeding season February to November
- breeding frequency (every 24 days)
- rats are neophobic

Moles:

- female comes into season between March and April
- gestation period 28 days
- breed once a year
- 4 offspring born
- young moles are ejected at 8 weeks of age

Rabbits:

- Doe is in season immediately after giving birth
- gestation period 28 days
- breed from end of January to November
- 4 – 8 kits born
- 4 – 6 litters a year
- weaned at approx 21 days old

Topic 3.2

May include:

Rats:

- feed at two or three familiar points each night
- average intake 25 – 30 grams
- avoid new objects
- can be bait shy
- require free water

Moles:

- earthworms
- earthworm cocoons
- insect larvae
- slugs
- millipedes

Rabbits:

- herbivores
- eat approximately 0.5kg green matter per day
- food passes through the system twice
- normally feeding early morning or early evening

Topic 3.3

May include:

Rats:

- prefer a stable environment
- very active in familiar areas
- can climb rough walls and pipes
- jump well up to 100cm
- good swimmers

Moles:

- mainly solitary creatures
- territorial
- day is split between 4 hours working and 4 hours resting
- runs are between 100 – 225mm deep
- dig up to 200 metres of tunnels
- shallow runs in wet weather
- deeper runs in dry weather

Rabbits:

- mainly nocturnal
- usually live in warren families
- spend more time in burrows during winter months
- often live on the surface during the summer

Topic 3.4

May include:

- agricultural and horticulture crops and stores, and neighbours to these
- municipal and amenity land
- sports ground
- industrial land
- trees and shrubs
- banking, railways, rivers, flood banks
- undermining
- grass airstrips
- electrical installations

Topic 3.5

May include:

- reduction in crop values
- costs related to damage
- costs related to control
- transmission of disease
- public reaction
- environmental impact
- agricultural crop assurance schemes
- any damage leading to safety implications

Learning outcome

The learner will:

LO4 Know the methods of preventative management and control of the species (**Criteria 4.1 – 4.3**)

Assessment criteria

The learner can:

AC4.1 State preventative management for the target species

AC4.2 State the natural control methods for the target species

AC4.3 State the alternative methods of population control

Topic 4.1

May include:

- exclusion barriers
- closed containment or removal of potential food sources
- habitat/environment changes
- use of repellents (NB) it is widely recognised that preventative management is not effective for mole

Topic 4.2

May include:

- approximate life expectancy
- natural predators
- species competition
- food availability
- weather conditions
- impact of seasons

Topic 4.3

May include as appropriate to the species:

- shooting
- snaring/trapping
- poison
- predation
- ultrasound

Learning outcome

The learner will:

LO5 Be able to complete a site survey prior to carrying out control by Aluminium Phosphide (**Criteria 5.1 – 5.3**)

Assessment criteria

The learner can:

AC5.1 Identify the natural habitats of the target species

AC5.2 Identify signs of a target species on the site

AC5.3 Identify signs of other non-target species on the site requiring protection

Topic 5.1

May include:

Rats:

- position and topography of home
- outside burrows
- roof spaces
- storage areas
- evidence of gnawing (holes etc)

Moles:

- woodlands
- hedgerows
- airfield grass strips
- light cultivated land

Rabbits:

- burrows as part of warrens
- burrow into earth banks and under buildings
- close to a suitable food source
- warm and dry with access to water

Topic 5.2

May include:

Rats:

- droppings
- smears
- holes
- damage to structures and food
- runs

Moles:

- Mole hills
- surface runs
- monitoring target species activity

Rabbits:

- droppings
- scrapes

- holes
- damage to crops and food
- runs

Topic 5.3

May include:

- workers
- visitors
- general public
- children
- farm animals
- domestic animals
- birds
- other mammals

Learning outcome

The learner will:

LO6 Be able to operate Aluminium Phosphide application equipment safely (**Criteria 6.1 – 6.5**)

Assessment criteria

The learner can:

AC6.1 Prepare the site for application

AC6.2 Carry out pre use checks to the applicator

AC6.3 Demonstrate how to fill the applicator safely

AC6.4 Demonstrate safe and accurate application procedures

AC6.5 Carry out all activities protecting human health and the environment

Topic 6.1

May include:

- locate all the rat/rabbit holes
- clear vegetation
- ensure rabbits/moles/rats are below ground
- seal up bolt holes (rabbits)
- timing of application
- Rabbits – during late morning and afternoon
- (November to March)
- Moles- locate underground runs
- use warning signs as required

Ensure that people and animals not involved with the operation are cleared from the site

Topic 6.2

To include:

- use a systematic method to identify serviceability
- ensure correct applicator used for product
- be aware of and comply with, the safety implications identified in the risk assessment
- comply with the Code of Practice/label requirement
- set up the equipment as per manufacturer's instructions

Topic 6.3

To include:

- check wind direction prior to opening container
- ensure correct PPE / RPE is used
- show face fit testing
- open container out of doors adjacent to work area
- load the applicator as per instructions

Topic 6.4

Methods to achieve accurate application

To include:

- begin work in the part of the fumigation area which is furthest downwind
- keep a check on the wind direction during gassing operations
- never place or leave, gassing compounds on the ground surface
- position the product in the holes
- check amount dispensed
- seal each burrow or entry point to be as gas-tight as possible

Topic 6.5

To include:

- All activities carried out correctly and safely

Learning outcome

The learner will:

LO7 Understand how to carry out post operational procedure (**Criteria 7.1 – 7.4**)

Assessment criteria

The learner can:

AC7.1 Complete an application record

AC7.2 Explain how to clean and decontaminate the applicator

AC7.3 Describe the storage requirements for the applicator

AC7.4 State the monitoring requirements for the site following treatment with Aluminium Phosphide

Topic 7.1

To include:

- suitable application record completed

Topic 7.2

May include:

- wear appropriate PPE/RPE
- ensure that the applicator has no product trapped inside by tapping any dust residues or powder into the last burrow and cover
- transport the device to a safe location for venting in a well-ventilated separate part of the vehicle to the driver and any passengers or in a gas tight container stored in a part of the vehicle where no contamination of people can occur.
- venting should be carried out in the open in a safe and secure location, protected from rain and well away from any habitation or otherwise occupied buildings. Venting should
- continue until no more gas is being produced and the applicator is considered to be empty
- at the first available opportunity following this emptying procedure the applicator should be cleaned by washing as described on the product label
- the applicator must be thoroughly dry before its next use
- inspect the applicator for wear and damage

Topic 7.3

May include:

- check all equipment is suitably stored in service vehicle to ensure safety of staff

Topic 7.4

May include:

- gas monitoring after 48hrs to determine gas levels
- check wind direction, wear full PPE and take two readings one at head height and one at 10cm above the ground starting from the edge of the pre-determined risk area down wind of the fumigation area.
- working into the wind take further readings at 5m intervals up to the centre of the fumigation area. If phosphine is detected at any of these points clearance cannot be granted but the risk area may be reduced to the last positive reading or 10m from the edge of the fumigation area whichever is the greater
- repeat the process until four sets of readings have been taken at opposite sides points from the risk area to the centre of the fumigation area
- once all readings show phosphine levels below 0.01ppm barriers can be removed and the owner occupier be informed that the treatment is complete and the Fumigation and risk areas are safe to re-enter
- keep a record of all readings

How to use gas monitoring equipment:

- Gas monitoring equipment is in calibration
- How to turn on gas monitoring equipment
- How to bump test gas monitoring equipment if required
- How to take readings with the gas monitoring equipment
- Depending on the equipment used how to convert g/m³ into ppm

Unit 262 The practices of using aluminium phosphide for vertebrate pest control

Supporting information

Evidence requirements

Assessment carried out by oral questioning and practical observation.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Safe Practice

The Assessor and Candidate must wear Personal Protective Equipment (PPE) when appropriate.

The Assessor must ensure that a Site Specific Risk Assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons and the environment are not endangered. Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard. The Assessor may stop the assessment on the grounds of safety at any time at their discretion.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Code of Practice for Using Plant Protection Products.

This is available from www.hse.gov.uk

Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. 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:

Centre Handbook: Quality Assurance Standards

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.

Centre Handbook: Quality Assurance Standards

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](#).

City & Guilds

For over 140 years, we have worked with people, organisations and economies to help them identify and develop the skills they need to thrive. We understand the life-changing link between skills development, social mobility, prosperity and success. Everything we do is focused on developing and delivering high-quality training, qualifications, assessments and credentials that lead to jobs and meet the changing needs of industry.

We partner with our customers to deliver work-based learning programmes that build competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

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