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National Occupational Standards for Chemical, Pharmaceutical and Petro-chemical Operations

Process Operator

Approved by UKCG May 2005

The Sector Skills Council for Chemicals, Nuclear, Oil and Gas Petroleum and Polymers

AMENDMENTS				
AMENDMENT & DATE	**PAGES**	**CHANGES MADE BY:**	**CHECKED BY:**	**APPROVED BY:**

Any amendments made to this standard by Cogent will be recorded above.

Commentary for Unit 1.13:

Working effectively in a team

This unit addresses the competence required to work with others. This involves:

- those working in isolation, who need to communicate with others
- those working in groups
- accepting and clarifying responsibilities
- providing and receiving support and feedback
- working in ways which maintain your own and other's safety

There are three elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.13.1 Determine and agree individual responsibilities in working with others
1.13.2 Complete work activities in conjunction with others
1.13.3 Provide and receive support and feedback

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Responsibility	That which is given by the appropriate authority
Authority	This gives the individual/s, permission to perform the activities
Personnel/work situation	This may include one, or a combination of: • one to one • group/team work • where disagreement occurs • on person to a group situation
Communicate	This may include all forms of communication including:

- spoken
- written
- electronic

Documentation	This may include all types of documentation that may be used in the organisation, in relation to the activity.
Corrective action	To be aware of potential hazards involved in the process, and take corrective action when necessary, including emergency shutdown.
Problems	These include those encountered with either plant/equipment/materials/and/or personnel.
Feedback/Support	Assistance given or received within the organisation. All forms of feedback and support should be constructive.
Health, Safety and Environmental legislation	To be aware of all relevant legislation.

ELEMENT 1.13.1 Determine and agree individual responsibilities in working with others

In carrying out this work you must:

1. Check that you have the required **authority** to complete the required activity
2. Check whether you need to inform others who may be affected by this activity
3. If required, **communicate** with others by the appropriate method
4. Check that all **personnel** have received the necessary information
5. Check that all **personnel** understand and agree to their responsibilities
6. Deal promptly with any **problems** that arise, that are your **responsibility**
7. For **problems** that you cannot solve and/or are not your **responsibility** inform the appropriate person/s
8. Follow safe working procedures at all times
9. Work within agreed time schedules
10. Complete any required **documentation** clearly and accurately

To do this you need to know

a) the definition of authority and responsibility within the organisation
b) how to check whether you have the required authority
c) your personal responsibility in the operation
d) how to check whether others need to be informed
e) methods of communication within the organisation
f) how to check that all parties understand what is required of them (if required)
g) your personal responsibilities with regard to health, safety and environment
h) what typical problems may arise and how to deal with them

i) who to inform if you cannot solve the problem and/or it is not your responsibility

j) the importance of keeping to agreed time schedules

k) what documentation to use and what information needs to be recorded

ELEMENT 1.13.2 Complete work activities in conjunction with others

In carrying out this work you must:

1. Check that you understand the work activity
2. Ensure that you know and understand your **responsibility** in the activity
3. Check, when required, that all other **personnel** understand their responsibililties
4. Ensure that the activity proceeds as planned
5. Keep other relevant **personnel** informed of the progress of the activity
6. Deal promptly with any **problems** in the activity that are your responsibility
7. Take appropriate **action** when disagreement occurs
8. Inform the appropriate person of any **problems** you cannot solve and/or are not your **responsibility**
9. Work safely at all times with regard to material, equipment and personal safety
10. Use appropriate methods of **communication**

To do this you need to know

a) the method of work activity planned

b) what your responsibilities are in the activity

c) why it is important that all personnel understand what is required of them

d) methods of monitoring the activity

e) how to keep all relevant personnel informed of the progress of the activity

f) how to deal with problems that are your responsibility

g) who to contact if you cannot deal with the problem and/or it is not your responsibility

h) what actions could be taken when disagreement occurs

i) your personal responsibilities with regard to health, safety and environment

j) what methods of communication to use and when to use them

ELEMENT 1.13.3 Provide and receive support and feedback

In carrying out this work you must

1. Ensure that all **personnel** know their responsibilities
2. Use appropriate methods of **communication** to keep all **personnel** informed
3. Identify when assistance is required
4. Give assistance when required if it is within the limit of your **authority**
5. Deal with any **problems** effectively, if they are your **responsibility**
6. Inform the appropriate person when you cannot solve a **problem** and/or it is not your **responsibility**
7. Give constructive **support** and **feedback** to appropriate **personnel**
8. Receive **support** and **feedback** from **personnel**
9. Follow safe working procedures at all times
10. Complete any **documentation** clearly and accurately

To do this you need to know

a) the meaning of responsibility and authority in the organisation

b) methods of communication within the organisation

c) how to identify when assistance may be required

d) how to give assistance within your limit of authority

e) why it is important to give constructive feedback and support in the operation

f) how to give constructive feedback and support within the organisation

g) why it is important to deal with problems effectively

h) who to inform if you cannot solve the problem and /or it is not your responsibility or within your limit of authority

i) what your personal responsibilities are with regard to health, safety and environment

j) what documentation needs to be completed

k) the importance of completing documentation/records accurately and clearly

Commentary for Unit 1.14:

Work safely

This unit describes the activities and understanding you will need to demonstrate that you conduct your day to day work in a healthy and safe way. This unit applies to everything you do in your daily work - in other words, it is applicable to all other activities. This involves:

- workplace health and safety policies
- personal presentation
- legal and workplace environmental procedures
- reporting procedures
- maintaining your own and other's safety while working

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.14.1 Minimise the risks to health and safety in the workplace
1.14.2 Minimise the risks to the environment in the workplace

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation can be used only in the situations defined below*, in the assessment of this unit, to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for the rest of unit.

*• where safety factors are important
• when a particular work activity does not happen very often

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Procedures that will

Specifications of how to carry out work activities in a manner

ensure the required outcomes if the procedure is followed accurately.
All workplace policies, practice and procedures should be specified.

Resources

A range of resources which are used in any activity.
These could include:

- Information, documentation and specifications
- manufacturer/supplier data for equipment and materials
- materials
- tools
- equipment

Hazard/risk important

The Health and Safety Executive (HSE) have defined two

concepts as follows: a hazard is something with the potential to cause
harm: a risk is the likelihood of a hazard's potential being realised.
The hazards covered by this unit are relating to:

- the use of plant and equipment
- the use of substances hazardous to health
- the workplace layout
- the working practices
- the job role

- people with special needs

Each organisation will have its own risk control strategy, the candidate will be required to work within this.

Risk Almost anything may be a hazard, but may or may not become a

risk. For example

- a trailing electrical cable from a piece of equipment is a hazard. If it is trailing across a passageway there is a high risk of someone tripping over it, but if it lies along a wall out of the way, the risk is much less
- toxic or flammable chemicals stored in a building are a hazard, and by their nature may present a high risk. However, if they are kept in a properly designed secure store, and handled by properly trained and equipped people, the risk is much less than if they are left about in a busy workshop for anyone to use - or misuse.
- a failed light bulb is a hazard. If it is just one bulb out of many in a room it presents very little risk, but if it is the only light on a stairwell, it is a very high risk. Changing the bulb may be a high risk, if it is high up, or if the power has been left on, or low risk if it is in a table lamp which has been unplugged.
- a box of heavy material is a hazard. It presents a higher risk to someone who lifts it manually than if a mechanical handling device is properly used.

Responsible/appropriate person Person/s who has the expertise in and/or responsibility for

the areas of work affected by the procedure. This is likely to include colleagues with production, safety, health, environment and quality specialisms.

Problems Problems with others, and/or working practices

- working policies which do not conform to laid down policies
- unsafe behaviour
- accidental breakages
- accidental spillages
- environmental factors

Work place This is the single or multiple areas in which you carry out your work.

Changes in the workplace covered by this unit are in relation to:

- layout of workplace
- new facilities and services

Working practices These are any activities, procedures , use of materials or equipment

and working techniques/instructions used in carrying out your job. In this unit it also covers any omissions in good working practice which may pose a threat to health and safety. Previous and new working practices covered by this unit are relating to:

- plant, machinery and equipment

- substances or materials
- people

Workplace policies documentation

The Workplace Policies covered by this unit are

prepared by the employer on the procedures to be followed regarding health and safety matters. It could be the employer's
safety procedures covering aspects of the workplace that should be
drawn to the employees' (and "other persons") attention.

Other persons Work Act

This refers to everyone covered by the Health and Safety at

including: visitors, members of the public, colleagues, contractors, clients, customers, patients, students, pupils.

Personal presentation

The includes: personal hygiene; use of personal protection equipment; clothing and accessories suitable to the particular workplace.

Information sources

Information sources covered by this unit are:

- internal Health and Safety experts
- HSE offices
- relevant industry publications
- external organisations

Health, safety and environmental Legislation

To be aware of all relevant legislation and company policy including the disposal of waste.

ELEMENT 1.14.1 Minimise the risks to health and safety in the workplace

In carrying out this work you must be able to:

1. Ensure that you carry out your **working practices** in accordance with legal requirements
2. Ensure that you follow the most recent **workplace policies** for your job role
3. Rectify those health and safety risks within your capability and job responsibility limits
4. Pass on any suggestions for reducing risks to **health and safety** within your job role to the responsible persons
5. Ensure that your personal conduct around the **workplace** does not endanger the health and safety of yourself or other persons
6. Follow the **workplace policies** and suppliers'/manufacturers' instructions for the safe use of equipment, materials and products
7. Report any differences between **working practices** and suppliers'/manufacturers' instructions to the appropriate person
8. Work safely at all times
9. Ensure that your personal presentation at work assures the health and safety of yourself and others, meets any legal duties, and is in accordance with workplace health and safety policies

To do this you need to know

a) your legal duties for health and safety in the workplace as required by the Health and Safety at Work Act 1974

b) your duties for health and safety as defined by any specific legislation covering your job role

c) what are safe working practices for your own job role

d) your scope and responsibility in rectifying risks

e) what the workplace procedures are for handling risks with which you are unable to deal

f) methods of identifying risks including direct observation, examining records, or interview

g) the particular health and safety risks which may be present in your own job role and the precautions you must take

h) what the specific organisational health and safety policies are covering your job role

i) the importance of dealing with or promptly reporting risks

j) who to report risks to, and methods of reporting them

k) where to find expert advice and guidance

l) why it is important to follow instructions accurately

m) the importance of your personal conduct in maintaining the health and safety of yourself and others

n) what the suppliers' and manufacturers' instructions are for the safe use of equipment, materials and products

o) what the importance is of your personal presentation in maintaining health and safety of yourself and others

ELEMENT 1.14.2 Minimise the risks to the environment in the workplace

In carrying out this work you must be able to:

1. Ensure that you follow the up to date legal requirements and workplace environmental procedures for your job role
2. Control those environmental **hazards** within your capability and job responsibility limits
3. Report promptly environmental **hazards** which you are unable to deal with
4. Report suggestions for limiting **risks** to the environment within your job role to the **responsible/appropriate person**
5. Follow suppliers'/manufacturers' instructions and **working practices** for the safe use and storage of materials/products and equipment
6. Follow the correct procedures for the handling and disposal of materials and products hazardous to the environment

To do this you need to know

a) what the specific workplace environmental procedures are which cover your job role

b) what the workplace practices are for your job role

c) what your responsibilities are for the environment as defined by any specific legislation covering your job role

d) your duties for health and safety as defined by any specific legislation covering your job role

e) your own responsibility for rectifying hazards to the environment

f) your own limitations, job responsibilities and capabilities

g) who to report suggestions to for limiting risks

h) who to report to with hazards which you are unable to deal with

i) suppliers/manufacturers and workplace instructions for the use and storage of materials and products hazardous to the environment and for the use of equipment

j) what substances and processes might be categorise as hazardous to the environment

k) what the procedures are for the correct disposal of hazardous materials

Commentary for Unit 1.11:

Responding to incidents, hazardous conditions and emergencies

NB This unit is a tailored version of a unit produced by the PINTO, which was originally designated Unit 4.

This unit is about your competence in responding to incidents, hazardous conditions and emergencies. This involves:

- reporting incidents, hazardous conditions and emergencies
- contributing to the correction of incidents, hazardous conditions and emergencies

During this work you must take account of the relevant operational requirements and safe working practices as they apply to you.

To demonstrate your competence you must generate/gather/present evidence of reporting and correcting incidents, hazardous conditions and emergencies.

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.11.1 Report incidents, hazardous conditions and emergencies
1.11.2 Contribute to the correction of incidents, hazardous conditions and emergencies

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is acceptable in the assessment of this unit to cover the full scope as defined by the glossary.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Incidents and Hazardous conditions These could include:

- flood
- toxic vapour and/or liquid release
- on controlled release of hydrocarbons
- injured personnel
- major plant or service failure
- explosions

Emergencies

Emergencies could include:

- fire
- release/spillage of materials
- release/spillage of materials
- explosion
- discovery of suspect package
- discovery of injured person
- accident involving person/equipment
- major services failure

Raising the alarm

This could be done by :

- mechanical/electrical means
- notifying someone else
- shouting

Action

Other actions to be taken could include:

- emergency shut down of the plant
- evacuation of the plant
- notifying other people
- assessing risk
- emergency first aid
- shut down of the operation

Materials

May include solids, liquids and gases.

Equipment/plant

This may include any equipment/plant where there is some interaction between items and/or people

Problems

These can relate to either personnel and/or equipment.

Documentation

Including that relating to emergencies, reports and any other relevant documentation.

Health, safety & environmental legislation To include relevant legislation and company policy.

Risk assessment To assess the likelihood of harming yourself and/or others by taking some form of action.

Communication To include spoken, written and/or electronic.

ELEMENT 1.11.1 Report incidents, hazardous conditions and emergencies

In carrying out this work you must:

1. Identify the nature, location and scope of **incident**
2. Raise the appropriate **alarm**
3. Report the incident to the appropriate people in accordance with plant reporting procedures
4. Provide accurate and unambiguous information to the appropriate people
5. Complete all relevant **documentation**
6. Work safely in accordance with operational requirements

To do this you need to know

a) how to select, use and care for PPE (e.g. sight/hearing protection, gloves, footwear, hard hats, respirators)

b) the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements

c) how to interpret operational requirements (e.g. policies, procedures, instructions, codes of practice, standards, schedules)

d) the emergency procedures for plant and site

e) how to work with and within the Permit to Work system

f) the types of incidents which should be reported (to include fire; flood; toxic vapour and/or liquid release; uncontrolled release of hydrocarbons; explosions; injured personnel; major plant or service failure)

g) how the alarm should be raised for each type of incident

h) how to access, interpret and implement site emergency plans; environmental procedures; plant emergency procedures

i) how to communicate effectively (e.g. verbal; written)

ELEMENT 1.11.2 Contribute to the correction of incidents, hazardous conditions and emergencies

In carrying out this work you must:

1. Follow appropriate procedures after the situation has been assessed
2. Inform appropriate people as actions are taken
3. Take the correct **action,** in accordance with procedures, to make the process safe
4. Take the correct **action**, in accordance with procedures, to deal with the incident

5. Minimise the incident, hazard or **emergency**
6. Minimise waste and loss
7. Act promptly and in association with others
8. Correctly modify actions in response to changing conditions
9. Work safely in accordance with operational requirements

To do this you need to know

a) how to select, use and care for PPE (e.g. sight/hearing protection, gloves, footwear, hard hats, respirators)

b) the implications of statutory (e.g. HASAWA and COSHH) and organisational requirements

c) how to interpret operational requirements (e.g. policies, procedures, instructions, codes of practice, standards, schedules)

d) the emergency procedures for plant and site

e) how to work with and within the Permit to Work system

f) the procedure for responding at an early stage of an incident (to include fire; flood; toxic vapour and/or liquid release; uncontrolled release of hydrocarbons; explosives; injured personnel; major plant or service failure)

g) how to access, interpret and implement site emergency plans; environmental procedures; plant emergency procedures

h) own responsibilities during emergencies

i) potential incidents within your area of responsibility and the actions to be taken

j) the need for and use of emergency equipment

k) the appropriate first response to casualties

l) the effect of the emergency on plant, equipment and personnel

Commentary for Unit 1.12:

Handover

This unit addresses the competence required to handover operational responsibility, materials and/or information to others in the workplace. This involves:

- completion of handover information
- communication with incoming operator/s
- maintaining the operation of the equipment during handover
- accepting and confirming responsibility taken over
- maintaining your own and other's safety while working

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.12.1 Follow handover procedure

1.12.2 Confirm responsibility accepted

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials — May include solids, liquids and gases.

Operating instructions — The set of instructions which describe the work to be carried out,

including details of the operating parameters.

Operating parameters — The conditions under which the processing should take place

Handover — The handing over of operational responsibility

Handover situation — May include some or all of the following:

- at the end of a shift
- during a shift at an appropriate point
- illness
- accident
- emergency situation
- exchange of responsibility during an operating procedure
- exchange of information during an operating procedure
- transfer of materials during an operating procedure

Handover method — May include some or all of the following methods:

- written handover
- verbal handover
- electronic handover

Equipment/plant — This may include equipment/plant where there is some interaction

between items and/or people. Also may include a number of parameters within the operator's control, and some control instrumentation.

Typical equipment within workplace area may include:

- chemical reactors
- addition tanks
- phase separators
- receiving vessels
- pipework and pumps
- film coaters
- solution make-up vessels
- filters and spray equipment

PPE Personal protective equipment to be specified, when necessary.

PTW May include permit to work. Authority to start, and/or continue with the operation or the equivalent.**Process type** Batch and/or continuous processing. The following types may be included:

- batch operations, where there are a number of batch operations running simultaneously, and also a multi-staged batch operation. .
- continuous operations, such as reaction, recovery, separation and purification processes, mixing, granulating, drying and compressing.

Problems These can relate to either personnel, materials, equipment , operating instructions and/or specifications. Where a problem requires another person, the person would be expected to report the problem to the person who has the necessary authority to deal with it.

Corrective actions May include adjust, request assistance or shutdown.

Documentation Including that relating to handover, and any other relevant documentation.

Conditions Control of conditions may include:

temperature, flow, humidity, pressure, ph , density and level

Responsibility To be in charge of a certain operation, and accept and confirm that responsibility

.

Confidentiality Only providing information to those who are authorised to have it.

Communicate To include spoken, written and/or electronic.

Health, safety & environmental legislation To include all relevant legislation and company policy.

ELEMENT 1.12.1 Follow handover procedure

In carrying out this work you must:

1. Check that you know the required **handover method**
2. Check that if required, you have the necessary **PTW** or equivalent
3. Check that you are aware of the current **handover situation**
4. Check that the **handover** time is correct
5. Ensure that you complete any relevant handover **documentation** clearly and accurately
6. Check and confirm that the information contained in the **handover situation** is correct
7. Ensure that all relevant **handover** information is given to the incoming operator
8. **Handover** at the correct time and place
9. Maintain safe and effective operation of the **equipment** during **handover**
10. Wear appropriate **PPE**
11. **Communicate**, if required, with relevant personnel
12. Deal promptly with any **problems** that arise, reporting any which you cannot solve and/or are not your responsibility
13. Follow safe working procedures at all times

To do this you need to know

a) handover methods, and specifically the one to be used in the operation

b) what the current handover time and handover situation is

c) the importance of the correct handover time and method

d) why it is important to complete all documentation clearly and accurately

e) the consequences of not checking and confirming handover information

f) why it is important to give the incoming operator all relevant information

g) the importance of knowing the correct time and place for the handover

h) how to maintain safe and effective operation of equipment during handover

i) the importance of communication, keeping others informed during the operation

j) your personal responsibilities with regard to health, safety and environment

k) what personal protective equipment to use and why

l) the types of problems that can occur and how to recognise and deal with them

m) who to contact if there is an unsolvable problem and/ or it is not your responsibility

ELEMENT 1.12.2 Confirm responsibility accepted

In carrying out this work you must:

1. Check that you have the correct **handover** information
2. Check that you can interpret and understand the **handover** information
3. Clarify any concerns over the **handover** information with the appropriate person
4. Check that you have any relevant **documentation** that you may need to proceed
5. Complete any relevant **documentation** clearly and accurately
6. Check that any information is recorded correctly at time of **handover**
7. **Accept** and confirm **responsibility**, by appropriate method, after **handover** of information, responsibility and / or materials has taken place
8. **Communicate** if required with relevant personnel
9. Check that the **PTW** or equivalent, is complete (if necessary)
10. Wear appropriate **PPE**
11. Deal promptly with any **problems** in the procedure that are your responsibility
12. Inform the appropriate person of any **problems** you cannot solve and/or are not your responsibility
13. Work safely at all times
14. Ensure that security and **confidentiality** is observed where necessary

To do this you need to know

a) the importance of confirming that you have the correct handover information

b) how to interpret handover information

c) why it is important to clarify any points

d) what documentation may need to be obtained before proceeding

e) why it is important to complete any documentation clearly and accurately

f) methods of accepting and confirming responsibility

g) why it may be important that the permit to work is complete

h) why it is important to complete documentation clearly and accurately

i) methods of communication

j) what problems may occur in the operation and how to deal with them

k) who to report to with unsolvable problems and/or those which are not your responsibility

l) your personal responsibilities with regard to health, safety and environment

m) when and why PPE needs to be worn

n) when it may be important to observe security/confidentiality

Commentary for Unit : 1.1

Receive goods and materials into storage

NB This unit is a tailored version of a Distribution unit produced by the Distributive NTO, which was originally designated Unit B3.

This unit addresses the competence required to receive goods and materials into storage. You will need to be able to prepare for and receive deliveries. You are expected to prepare the receiving area and subsequently receive goods and materials. This includes completing all the relevant documentation and making sure stock control systems are updated. There may be situations where you are required to refuse goods and materials. The unit requires that you are able to inform the appropriate people about why the goods were refused.

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.1.1 Prepare to receive goods and materials
1.1.2 Take goods and materials into storage

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Goods and materials

Goods and materials that are:
- delivered by suppliers
- returned from customers

Discrepancies

Discrepancies in deliveries that are a result of:
- shortfalls and over-supply
- defects in quality
- wrong items

Checking deliveries

Checking deliveries:
- visually
- physically for quality

ELEMENT 1.1.1 Prepare to receive goods and materials

In carrying out this work you must:

1. Know what is to be received into storage
2. Ensure the receiving area is cleaned, tidied and free from obstructions and hazards
3. Ensure that the appropriate handling equipment is available
4. Ensure the equipment is in good working order
5. Tell the right person if sufficient storage capacity is not available for anticipated deliveries
6. Ensure that all the documentation is complete, accurate and up to date

To do this you need to know

a) how to access and interpret information to determine the quantity and characteristics of deliveries

b) procedures relating to the receipt of goods and materials

c) what good housekeeping practices are and the consequences of not carrying them out

d) why accurate and complete documentation is important, and what the possible consequences of incorrect completion are

e) how to use stock control systems

f) where the sources of information on supplier history are and how to use them

g) what documentation to use, and why it is important to complete it accurately

h) what the legal and local regulations are affecting security, safety and the delivery of goods and materials, and how to apply them

i) what the communication process is within the organisation and how to use it

j) the importance of effective communication and the implications of not communicating effectively

ELEMENT 1.1.2 Take goods and materials into storage

In carrying out this work you must:

1. **Check deliveries** to confirm that the type, quality and quantity of goods is correct
2. Identify **discrepancies** in the delivery and take the right action when they happen
3. Refuse deliveries if necessary and make an accurate record of the refusal
4. Tell the right people about why the delivery was refused
5. Avoid damaging stock when taking deliveries
6. Update the stock control systems and make sure that documentation is complete and accurate
7. Handle goods in a safe and hygienic way

To do this you need to know

a) what the necessary handling equipment is and how to access it

b) what defects may arise in equipment and what actions to take in response to them

c) what actions to take to remedy defects and who to report to

d) why it is important to handle goods safely

e) where deliveries should be off-loaded

f) what the communication process is within the organisation and how to use it

g) the importance of effective communication and the implications of not communicating effectively

h) what to look for when checking goods for their acceptability

i) what the acceptable reasons are for refusing goods entry to storage

j) what the methods are for checking the type and quality of goods

k) what resources are available for checking goods entering storage

Commentary for Unit 1.3:

Prepare process materials according to instructions

NB This unit is a tailored version of a Combined Working Practices unit produced by the PINTOG, which was originally designated Unit 11.

This unit addresses the competence required to prepare processing materials according to instructions. This involves:

- measuring materials into required quantities
- being aware of and ensuring material quality is maintained
- handling materials in a safe manner
- preparing materials for use by blending and temperature control
- keeping material and stock control records

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.3.1 Measure out materials in specified quantities
- Prepare materials for process operations

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation will only be considered relevant and acceptable in the rare or dangerous occurrences* (see below) in the assessment of this unit, to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for the rest of unit.

*• health, safety and environmental issues

- emergency scenarios
- rare occurrences at work

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Material

Types of materials can include:

- those with specific Health, Safety and Environment (SHE) implications which require the use of Personal Protective Equipment (PPE)
- materials which are easily damaged, spilled or contaminated
- materials which are not easily damaged, spilled or contaminated, or materials with very high value
- materials with high security needs (*eg poisons,controlled drugs, high value items*)

Measuring equipment and systems These can include automated measuring, manual measuring,

semi-automated measuring or computer controlled measuring
equipment and systems.

Problems

Problems can occur when materials do not match specifications,

they do not meet quality and condition specifications, there are not

enough materials to provide the required quantity, or the handling

equipment is faulty or defective

Preparation

Preparation can involve any of the following:

- blending
- mixing
- drying
- colouring
- softening
- gas-ing
- warming/heating
- cleaning/sieving

Health, safety and environmental legislation To include all relevant legislation and company policy.

ELEMENT 1.3.1 Measure out materials in specified quantities

In carrying out this work you must:

1. Obtain and work to the correct instructions
2. Check that any unusual quantities stated in work instructions are correct before starting the task

3. Check that the **material** matches the specification
4. Accurately measure out the quantities required, keeping material wastage to a minimum
5. Use safe **material** handling techniques
6. Use **measuring equipment and systems** safely and effectively
7. Keep up to date, accurate and complete records
8. Deal promptly with any **problems** that arise, reporting those that you cannot solve and/or are not your responsibility
9. Accurately and promptly report any damage, loss and contamination to **materials** for which you are responsible and prevent the materials from being used until the problem has been dealt with

To do this you need to know

a) what materials are used in different processes, what happens to them as they are processed, and why they have to be prepared

b) what hazards to people and the environment arise from mishandling and misprocessing of materials and the precautions and procedures which should be applied when handling materials at each stage of the process and in storage

c) why processed, part processed materials, excess materials and recoverable by-products should be separated out as they are produced, the types of containment and storage used, and what records are kept about the removal and handling of these

d) what working practices and authorisations apply, the lines of communication and procedures that should be followed in a given situation and why it is important to work within the 'rules' of the organisation

e) why a specification is needed for a process and what information is normally given, where to get the specification for a given job, why it is so important to make sure that the specification is met, in what ways the specifications might change for different customers, and how to read and interpret a process specification

f) how to deal with typical problems,who to report unsolvable problems to

g) the sorts of records kept, how to complete them, where they are stored and who has access to them

h) what your personal responsibilities are with regard to health and safety

ELEMENT 1.3.2 Prepare materials for process operations

In carrying out this work you must:

1. Obtain and work to the required **material** specification
2. Control **material** preparation so that specifications are met
3. Use **material** handling techniques which are safe and which keep material wastage to a minimum
4. Operate preparation equipment safely and effectively
5. Promptly report any **problems** which you cannot deal with, and / or are not your responsibility
6. Keep up to date, accurate and complete records
7. Accurately and promptly report any damage, loss and contamination to materials for which you are responsible and prevent the materials from being used until the **problem** has been dealt with
8. Check that **materials** are within specification before transferring them on to the next stage

To do this you need to know

a) what materials are used in different processes, what happens to them as they are processed, and why they have to be prepared

b) what hazards to people and the environment arise from mishandling and misprocessing of materials and the precautions and procedures which should be applied when handling materials at each stage of the process and in storage

c) why processed, part processed materials, excess materials and recoverable by-products should be separated out as they are produced, the types of containment and storage used, and what records are kept about the removal and handling of these

d) what working practices and authorisations apply, the lines of communication and procedures that should be followed in a given situation and why it is important to work within the 'rules' of the organisation

e) why a specification is needed for a process and what information is normally given, where to get the specification for a given job, why it is so important to make sure that the specification is met, in what ways the specifications might change for different customers, and how to read and interpret a process specification

f) the sorts of records are kept, how to complete them, where they are stored and who has access to them

g) what your personal responsibilities are with regard to health and safety

Commentary for Unit 1.5

Produce by processing operation

This unit addresses the competence required to manufacture a product by simple batch or continuous processing. This involves:

- preparation of materials
- processing of product
- reconciliation of materials used
- clearing the area
- working in ways which maintain your own and other's safety

There are three elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.5.1 Prepare to produce product
1.5.2 Make product by processing operation
1.5.3 Reconcile materials and clear away

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials / products — May be expected to include solids, liquids and gases. Some may be hazardous.

Operating instructions/specification — The set of instructions which describe the work to be carried out, including details of the quality, quantity and time requirements.

Equipment/plant — This may include equipment/plant where there is some interaction between items and/or people. Also may include single items of equipment comprising a few parts

PPE — Personal protective equipment to be specified and worn when necessary.

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Problems — These can relate to either materials, equipment and/or materials and/or records/ specifications. The person carrying out this work would not be expected to resolve any equipment problem for which maintenance engineers are required. Where a problem does require a maintenance engineer, the person would be expected to report the problem to a more senior person.

Corrective actions — May include adjust, replace defective materials, request assistance or shutdown

Documentation — Includes records, specifications, and any other relevant documentation.

Waste — Including ways of minimising waste in the process and may include acceptance re-cycling within the operation.

Health, safety and Environmental legislation — To include all relevant legislation and company policy.

ELEMENT 1.5.1 Prepare to produce product

In carrying out this work you must:

1. Check that you have the required **operating instructions** and that they are clear and complete
2. Ensure that there are sufficient quantities of **materials/products** to meet requirements
3. Ensure that the **materials/products** to be processed are as specified
4. Check that the **equipment** to be used is in a safe and functional condition
5. When specified wear appropriate **PPE**
6. Ensure that all **records** are completed accurately and legibly
7. Deal promptly with any **problems** that arise, reporting any which you cannot solve
8. Follow safe working procedures when using **equipment** and dealing with hazardous materials
9. Complete any **documentation** accurately

To do this you need to know

a) the meaning of terms used in operating instructions
b) the functions and uses of the different types of equipment used in processing operations
c) the different handling characteristics of materials/products
d) why it is important to check that the equipment is ready
e) how to handle processing equipment safely to protect yourself and others
f) your personal responsibilities are with regard to health, safety and environment
g) what personal protective equipment to use and why
h) how to deal with typical problems
i) who to report to if you cannot solve a problem
j) what documentation to use and what information needs to be recorded

ELEMENT 1.5.2 Make product by processing operation

In carrying out this work you must:

1. Check that you have the required **specification** and that it is clear and complete
2. Make the **product** following the correct procedure
3. Ensure that the **product** meets the quality **specification**
4. Ensure that the **product** meets the quantity requirements in the time specified
5. Wear appropriate **PPE** if required
6. Deal promptly with any **problems** and deviations from **operating instructions** in the procedure
7. Inform the appropriate person of any **problems** you cannot solve and/or are not your responsibility
8. Work safely at all times with regard to **material/product, equipment** and personal safety
9. Complete any **records** and **documentation** correctly

To do this you need to know

a) the meaning of terms used in specifications

b) the handling characteristics of different types of materials to be produced

c) why it is important that products meet quality specifications

d) why it is important to meet quantity and time requirements

e) how to deal with typical problems and who to report unsolvable problems to

f) your personal responsibilities are with regard to health, safety and environment

g) when and why PPE needs to be worn

h) methods of documentation that are used, and the importance of completing correctly

ELEMENT 1.5.3 Reconcile materials and clear away

In carrying out this work you must

1. Check **products** made and **materials** used against the **operating instructions**
2. Record results accurately and legibly
3. Promptly report any unspecified results to the appropriate person
4. If necessary, isolate **equipment** according to standard operating procedure
5. Ensure that **equipment** is cleaned to the required state for next scheduled production
6. If specified wear appropriate **PPE**
7. Clear the area of all residual **materials, product** and **documentation**
8. Dispose of residual **materials**, **product** and **documentation** according to company procedure
9. Deal promptly with any **problems** that arise, reporting any which you cannot solve
10. Follow safe working procedures at all times

To do this you need to know

a) the meaning of terms used in operating instruction

b) methods of checking products made and materials used against the operating instructions

c) the importance of accurate reconciliation of materials/products

d) who to report unspecified results to

e) when it is appropriate to wear PPE

f) what procedure to follow to isolate equipment

g) when and how to clean equipment in readiness for next scheduled production

h) how to deal with typical problems

i) who to contact with unsolvable problems

j) what your personal responsibilities are with regard to health, safety and environment

k) why it is important to clear away all residual materials, products and documentation

l) how to dispose of residual materials, product and documentation according to company policy

m) what documentation needs to be completed and the importance of completing it correctly

Commentary for Unit 1.5

Produce by processing operation

This unit addresses the competence required to manufacture a product by simple batch or continuous processing. This involves:

- preparation of materials
- processing of product
- reconciliation of materials used
- clearing the area
- working in ways which maintain your own and other's safety

There are three elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.5.1 Prepare to produce product
1.5.2 Make product by processing operation
1.5.3 Reconcile materials and clear away

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials / products	May be expected to include solids, liquids and gases. Some may be hazardous.
Operating instructions/specification	The set of instructions which describe the work to be carried out, including details of the quality, quantity and time requirements.
Equipment/plant	This may include equipment/plant where there is some interaction between items and/or people. Also may include single items of equipment comprising a few parts
PPE	Personal protective equipment to be specified and worn when necessary.

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Problems	These can relate to either materials, equipment and/or materials and/or records/ specifications. The person carrying out this work would not be expected to resolve any equipment problem for which maintenance engineers are required. Where a problem does require a maintenance engineer, the person would be expected to report the problem to a more senior person.
Corrective actions	May include adjust, replace defective materials, request assistance or shutdown
Documentation	Includes records, specifications, and any other relevant documentation.
Waste	Including ways of minimising waste in the process and may include acceptance re-cycling within the operation.
Health, safety and Environmental legislation	To include all relevant legislation and company policy.

ELEMENT 1.5.1 Prepare to produce product

In carrying out this work you must:

1. Check that you have the required **operating instructions** and that they are clear and complete
2. Ensure that there are sufficient quantities of **materials/products** to meet requirements
3. Ensure that the **materials/products** to be processed are as specified
4. Check that the **equipment** to be used is in a safe and functional condition
5. When specified wear appropriate **PPE**
6. Ensure that all **records** are completed accurately and legibly
7. Deal promptly with any **problems** that arise, reporting any which you cannot solve
8. Follow safe working procedures when using **equipment** and dealing with hazardous materials
9. Complete any **documentation** accurately

To do this you need to know

a) the meaning of terms used in operating instructions
b) the functions and uses of the different types of equipment used in processing operations
c) the different handling characteristics of materials/products
d) why it is important to check that the equipment is ready
e) how to handle processing equipment safely to protect yourself and others
f) your personal responsibilities are with regard to health, safety and environment
g) what personal protective equipment to use and why
h) how to deal with typical problems
i) who to report to if you cannot solve a problem
j) what documentation to use and what information needs to be recorded

ELEMENT 1.5.2 Make product by processing operation

In carrying out this work you must:

1. Check that you have the required **specification** and that it is clear and complete
2. Make the **product** following the correct procedure
3. Ensure that the **product** meets the quality **specification**
4. Ensure that the **product** meets the quantity requirements in the time specified
5. Wear appropriate **PPE** if required
6. Deal promptly with any **problems** and deviations from **operating instructions** in the procedure
7. Inform the appropriate person of any **problems** you cannot solve and/or are not your responsibility
8. Work safely at all times with regard to **material/product, equipment** and personal safety
9. Complete any **records** and **documentation** correctly

To do this you need to know

a) the meaning of terms used in specifications

b) the handling characteristics of different types of materials to be produced

c) why it is important that products meet quality specifications

d) why it is important to meet quantity and time requirements

e) how to deal with typical problems and who to report unsolvable problems to

f) your personal responsibilities are with regard to health, safety and environment

g) when and why PPE needs to be worn

h) methods of documentation that are used, and the importance of completing correctly

ELEMENT 1.5.3 Reconcile materials and clear away

In carrying out this work you must

1. Check **products** made and **materials** used against the **operating instructions**
2. Record results accurately and legibly
3. Promptly report any unspecified results to the appropriate person
4. If necessary, isolate **equipment** according to standard operating procedure
5. Ensure that **equipment** is cleaned to the required state for next scheduled production
6. If specified wear appropriate **PPE**
7. Clear the area of all residual **materials, product** and **documentation**
8. Dispose of residual **materials**, **product** and **documentation** according to company procedure
9. Deal promptly with any **problems** that arise, reporting any which you cannot solve
10. Follow safe working procedures at all times

Commentary for Unit 1.2:

Maintain the quality of goods in storage

NB This unit is a tailored version of a Distribution unit produced by the Distributive NTO, which was originally designated Unit B6.

This unit is about looking after stored goods so they do not deteriorate or become damaged. This involves:

- keeping the storage area safe and secure
- maintaining the correct storage conditions
- acting quickly if stock is in danger of deteriorating or being damaged
- prompt removal of deteriorated or damaged stock

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.2.1 Monitor and maintain storage conditions
- Monitor goods in storage

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Storage conditions

Examples of storage conditions are:
- Environmental control systems
- Storage systems
- Physical security

Appropriate person

To include stores and/or plant personnel.

Problems

The kinds of problems which could be encountered include:
- Environmental control systems not operating correctly
- Storage systems not being used correctly

ELEMENT 1.2.1 Monitor and maintain storage conditions

In carrying out this work you must:

1. Regularly and thoroughly check that **storage conditions** are satisfactory, and make any necessary adjustments, within own responsibility
2. Keep the storage facilities tidy, clean and safe
3. Notice **problems** with the storage facilities and report the situation to the **appropriate person**
4. Take prompt action if stored goods are in danger of deteriorating or being damaged and notify the **appropriate person** to advise what has happened

To do this you need to know

a) the physical layout of storage facilities

b) how to maintain the right storage conditions for goods you need to monitor

c) how to deal with defects in the storage conditions, and who to report what has happened to

d) what safety and security procedures to follow

ELEMENT 1.2.2. Monitor goods in storage

In carrying out this work you must:

1. Regularly and thoroughly check that goods are in a satisfactory condition
2. Notice any deterioration or damage to stored goods and report it to the **appropriate person**
3. Mark defective goods and remove them from storage
4. Act promptly if you find any goods that are dangerous

To do this you need to know

a) the types of goods in storage that you need to monitor

b) how and why goods in storage might deteriorate

c) how to recognise signs of damage or deterioration, what to do about it and who to report this to

d) how to tell whether defective goods are dangerous

e) any legal or organisational constraints on the storage of particular goods

f) what Safety and security procedures to follow

Commentary for Unit 1.4:

Moving raw materials, intermediate and finished products, to facilitate production

This unit addresses the competence required to transfer materials into and between stages of production. This involves:

- moving raw materials, intermediate and finished products
- maintaining supply of materials to production
- removing finished product, waste and unused materials from processing area
- maintaining your own and other's safety while working

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.4.1 Maintain supply of materials
1.4.2 Remove finished product, waste and unused materials
There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials	May be expected to include solids, liquids or gases.
Finished product	The outcome of the processing procedure
Methods of movement	These can be either: • by mechanical transport(incl fork-lifts, hoists) • by automatic transfer route through the plant • by hand
PPE	Personal protective equipment to be specified and worn when necessary
Specification	The set of authorised instructions which describe the work to be carried out.
Equipment	Mechanical moving equipment, to include fork lifts, hoists etc.

	PPE to be specified, when necessary.
.	
Problems	These can relate to either materials, equipment and/or materials and/or delivery specifications. The person carrying out this work would be expected to resolve any equipment problem for which maintenance engineers are not required. Where a problem does require a maintenance engineer, the person would be expected to report the problem to a more senior person.
Corrective actions	May include, request assistance or shutdown
Documentation	Includes stock records, batch documentation, and any other relevant documentation.

Health, safety and Environmental legislation To be aware of all relevant legislation, and company policy, including disposal of waste

ELEMENT 1.4.1 Maintain supply of materials

In carrying out this work you must:

1. Check that you have the required **specification** and that it is clear and complete
2. Ensure that **materials** supplied are to the **specification**
3. Prepare the **materials** correctly for transfer and/or use in the processing
4. Check that the **equipment** to be used is in a safe and functional condition
5. Deal promptly with any **problems** that arise, reporting any which you cannot solve
6. Follow safe working procedures when using **equipment** and dealing with hazardous materials
7. Load, unload and transfer **materials** according to **specification**
8. Complete the preparations within the required time
9. Complete required **documentation**

To do this you need to know

a) the meaning of terms used in specifications for moving materials
b) methods of loading, unloading and transferring materials
c) the functions and uses of the different types of equipment used in moving materials
d) how to handle equipment safely in ways that protect yourself and others from risk
e) your personal responsibilities with regard to health, safety and environment at work
f) what personal protective equipment to use and why
g) what corrective action to take and when
h) the types of equipment problems that can occur and how to recognise and deal with them
i) what documentation to use and what information needs to be recorded

ELEMENT 1.4.2 Remove finished product, waste and unused materials

In carrying out this work you must:

1. Check that you have the required **specification** and that it is clear and complete
2. Remove the **finished product** from the processing area
3. Label and store **finished product** accurately
4. Wear appropriate **PPE** if required
5. Ensure that appropriate action is taken to minimise waste
6. Dispose of waste according to policy guidelines
7. Transfer unused **materials** to designated area
8. Deal promptly with any **problems** in the procedure that are your responsibility
9. Inform the appropriate person of any **problems** you cannot solve and/or are not your responsibility
10. Work safely at all times with regard to **materials**, **equipment** and personal safety
11. Complete all necessary **documentation**

To do this you need to know

a) the meaning of terms used in specifications

b) the handling characteristics of different types of materials to be moved, including hazardous if appropriate

c) what methods of storing and labelling are used

d) when and why PPE needs to be worn

e) methods of waste disposal, and how to minimise waste

f) why it is important to keep the processing area clear

g) what types of problem may occur and how to deal with them

h) when and how to take corrective action

i) who to inform if you cannot solve a problem and/or it is not your responsibility

j) your personal responsibilities with regard to health, safety and environment

k) methods of documentation that are used

Commentary for Unit 1.6:

Routine maintenance of plant and equipment

This unit addresses the competence required to maintain plant, equipment and services against specifications, ie planned maintenance. This involves:

- maintenance of plant, equipment and/or services
- liaising with other personnel
- completing necessary documentation
- maintaining your own and other's safety while working

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.6.1 Maintain plant, equipment and/or services
1.6.2 Liase with others and complete necessary documentation

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials	May include solids, liquids and gases.
Maintenance	May be expected to include planned maintenance to either plant, equipment and/or services.
Maintenance schedule	The set of instructions which specify the work to be done.
Authority	That which is given and enables you to perform a task.
Time schedule	The time allotted for the planned maintenance.
Equipment/plant/services	Equipment/plant/services may include fitting blanks, plugs, cap ends, flexible hoses, airlines, drain hoses and routine lubrication.
PPE	Personal protective equipment to be specified, when necessary.
PTW	May include permit to work. Authority to start, and/or continue with the operation or the equivalent.
Problems	These can relate to either materials, equipment, materials, operating instructions and/or specifications.
Corrective actions	May include adjust, request assistance or shutdown.
Documentation	Including that relating to maintenance, and any other relevant documentation.
Conditions	Control of conditions may include: • temperature, flow, humidity, pressure, density, ph and level

Communicate/Communication Methods of communication may include spoken, written and/or electronic.

Health, safety & environmental legislation To include all relevant legislation and company policy.

ELEMENT 1.6.1 Maintain plant, equipment and/or services

In carrying out this work you must:

1. Check that you have the required **maintenance schedule** and that it is are clear and complete
2. Check that if required, you have the necessary **authority** to perform the task
3. Ensure that you have the necessary tools and equipment to complete the **planned maintenance**
4. Confirm the status of the **equipment/plant and/or services** before maintenance begins
5. Wear appropriate **PPE**
6. Begin planned **maintenance** operations
7. Ensure that you carry out the planned **maintenance** in a specified sequence
8. Ensure that you work within given **time schedules**
9. Minimise waste/loss and/or damage whenever possible
10. **Communicate**, if required, with relevant personnel
11. Deal promptly with any **problems** that arise, reporting any which you cannot solve and/or are not your responsibility
12. Follow safe working procedures when using **equipment** and dealing with hazardous materials

To do this you need to know

a) the meaning of terms used in maintenance schedules
b) the importance of having the necessary authority to complete the work
c) why it is important to have the correct tools for the job
d) methods of maintenance for the appropriate type of plant, equipment and/or service
e) the importance of confirming status of plant/equipment
f) why it is important to carry out the maintenance in a planned sequence
g) the importance of time schedules in the operation
h) the importance of communication, keeping others informed during the operation
i) why it is important to minimise waste, loss and/or damage in the operation
j) how to handle equipment safely in ways that protect yourself and others from risk
k) your personal responsibilities with regard to health, safety and environment
l) what personal protective equipment to use and why
m) the types of problems that can occur and how to recognise and deal with them
n) who to contact if there is an unsolvable problem and/or it is not your responsibility

ELEMENT 1.6.2 Liase with others and complete necessary documentation

In carrying out this work you must:

1. Check that you have the correct **maintenance schedule** and that it is clear and complete
2. Check that you have all of the relevant **documentation** to proceed
3. **Communicate** with all other personnel who will be affected by your **maintenance** activity
4. Inform all other personnel when **maintenance** begins
5. Ensure that you work to an agreed **time schedule**
6. Inform all other personnel when **maintenance** is completed
7. Ensure that the relevant **documentation** is completed accurately and clearly
8. Record any instances where planned **maintenance** cannot be completed, and/or where there are other problems
9. Wear appropriate **PPE**
10. Deal promptly with any **problems** in the procedure that are your responsibility
11. Pass completed **maintenance** records to appropriate personnel
12. Work safely at all times with regard to **materials, equipment** and personal safety

To do this you need to know

a) the meaning of terms used in maintenance schedules

b) what documentation needs to be obtained before proceeding

c) how to check that you have the necessary documentation

d) why it is important to complete documentation clearly and accurately

e) why it is important to communicate with all personnel who will be affected by your maintenance

f) why it is important to inform when maintenance begins and ends

g) the importance of keeping to time schedules

h) why it is important to record when maintenance cannot be completed and/or there are other problems

i) who to pass completed maintenance records to

j) your personal responsibilities with regard to health, safety and environment

k) when and why PPE needs to be worn

Commentary for Unit 1.7

Clean and prepare items of equipment for production and / or maintenance

This unit addresses the competence required to clean the area and /or equipment to prepare for either production and/or maintenance. This involves:

- dismantling of equipment
- cleaning of equipment
- re-instating the equipment
- maintaining your own and other's safety while working

There are three elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.7.1 Dismantle equipment
1.7.2 Clean equipment
1.7.3 Re-instate equipment

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Documentation Includes any relevant documentation.

Materials May include solids, liquids and gases.

Operating instructions/specification The set of instructions which describe the work to be carried out, including details of the parameters for doing so.

Dismantling operations May include, within limits of own authority:

- disconnecting
- isolating
- disassembling

Cleaning operations	May include the physical removal of solids by either manual or mechanical means, wiping, blow down, washing etc. Also may include the physical removal of liquids by draining and washing, and the physical removal of gases by purging and chemical cleaning.
Equipment/plant	This may include equipment/plant where there is some interaction between items and/or people. Also may include single items of equipment comprising a few parts
PPE	Personal protective equipment to be specified, when necessary.
.	
Problems	These can relate to either materials, equipment, personnel and/or specifications. Where a problem requires a maintenance engineer, the person would be expected to report the problem to a more senior person.
Corrective actions	May include adjust, request assistance or shutdown.
Communicate	May include either, spoken, written and/or electronic.
Liaison	To keep personnel informed throughout the operation.
Maintenance	Work which is carried out to enable the process to run as smoothly as possible.
Health, safety and environmental legislation	To include any relevant legislation and company policy
Authority/Authorisation	The permission that is needed to complete the task.
SOP	Standard Operating Procedure. The method of completing a task according to stated guidelines in the organisation.
Documentation	May include any relevant documentation

ELEMENT 1.7.1 Dismantle equipment

In carrying out this work you must:

1. Check that you have the required **authorisation** to proceed
2. Check that you have the **specification** detailing the work to be carried out
3. Identify correct **plant** and/or **equipment** according to **specification** details
4. Isolate **plant** and/or **equipment** according to **SOP**
5. Clear all residual **materials** and/or waste from the area in accordance with company procedures
6. **Dismantle plant** and/or **equipment** correctly, if required
7. When specified wear appropriate **PPE**
8. Deal promptly with any **problems** that arise, reporting any which you cannot solve and/or are not

your responsibility

9. Follow safe working procedures when using **equipment** and dealing with hazardous materials

To do this you need to know

a) the importance of having the necessary authorisation to proceed

b) the meaning of terms used in specifications concerned with cleaning

c) the importance of identifying the correct plant/equipment

d) methods of isolating plant/equipment

e) how to handle equipment safely in ways that protect yourself and others from risk

f) methods of cleaning plant/equipment

g) your personal responsibilities with regard to health ,safety and environment

h) what personal protective equipment to use and why

i) the types of problems that can occur and how to recognise and deal with them

j) who to contact if there is an unsolvable problem and/ or it is not your responsibility

ELEMENT 1.7.2 Clean equipment

In carrying out this work you must:

1. **Clean** the equipment by the appropriate method
2. **Communicate** with relevant personnel
3. Acuurately record information where appropriate
4. When specified wear appropriate **PPE**
5. Deal promptly with any **problems** in the procedure that are your responsibility
6. Inform the appropriate person of any **problems** you cannot solve and/or are not your responsibility
7. Work safely at all times with regard to **material, equipment** and personal safety
8. Complete any necessary **documentation**

To do this you need to know

a) appropriate methods of cleaning equipment

b) the importance of communication through the procedure

c) why it is important to keep accurate and clear records when necessary

d) when and why PPE needs to be worn

e) what problems may occur and how to deal with them

f) who to report to with unsolvable problems and/or those which are not your responsibility

g) your personal responsibilities with regard to health, safety and environment

h) methods of documentation that are used

ELEMENT 1.7.3 Re-instate equipment

In carrying out this work you must:

1. Use appropriate methods of re-assembly for the **plant** and/or **equipment**
2. Check the status of all **plant** and/or **equipment**, identifying any areas of concern
3. Ensure that all **plant** and/or **equipment** is confirmed as being clean and operational
4. Ensure that the condition of all **plant** and/or **equipmen**t is recorded accurately
5. **Communicate** with relevant personnel when required
6. When specified wear appropriate **PPE**
7. Deal promptly with any **problems** that arise, reporting any which you cannot solve
8. Follow safe working procedures at all times
9. Complete any **documentation** correctly

To do this you need to know

a) methods of re-assembly
b) the importance of checking the status of the plant and equipment
c) why it is important to identify any 'areas of concern'
d) why it is important to record all information accurately
e) why it is important to confirm and record the status of the plant and equipment
f) why it is important to communicate with relevant personnel
g) what problems may occur and how to deal with them
h) who to report to if you cannot solve problems and/or they are not your responsibility
i) what your personal responsibilities are with regard to health, safety and environment
j) what documentation needs to be completed and how

Commentary for Unit 1.8

Work in aseptic or clean room conditions

This unit addresses the competence required to work in aseptic or clean room conditions. This involves:

- strict adherence to procedures
- preparing to work in aseptic or clean rooms
- working correctly in aseptic or clean rooms
- maintaining your own and other's safety while working

There are two elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.8.1 Prepare for work in aseptic or clean room conditions
1.8.2 Work correctly in aseptic or clean room conditions

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation can be used only in the situations defined below*, in the assessment of this unit, to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for the rest of unit.

*• where safety factors are important
• when a particular work activity does not happen very often

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials / products	May include solids, liquids and gases. Some may be hazardous.
Specification / instructions	The set of instructions which describe the work to be carried out.
PPE	Personal protective equipment, to include clothing and footwear specified as appropriate for the conditions of work.
Scrub up/cleaning procedure	The procedure that is specified by the organisation as being appropriate for the conditions of work
Problems	These can relate to either clothing, materials and or, equipment.
Corrective actions	May include, request assistance and shutdown
Documentation	Includes any relevant documentation.
Health, safety and Environmental legislation	To be aware of all relevant legislation, and company policy including disposal of waste

ELEMENT 1.8.1 Prepare for work in aseptic or clean room conditions

In carrying out this work you must:

1. Check that you have the required work **instructions** and that they are clear and complete
2. Ensure that the **PPE** is correct and complete
3. Follow any **scrub up procedures** correctly
4. Put on the **PPE** correctly
5. Leave the changing room in a clean and tidy condition
6. Complete any **documentation** correctly
7. Pass information when required to the appropriate person
8. Deal promptly with any **problems** that arise, reporting any which you cannot solve
9. Follow safe working procedures at all times

To do this you need to know

a) the meaning of terms used in work instructions
b) how to check that you have the required PPE
c) what scrub up and personal cleaning procedures need to be completed
d) how to handle the PPE and put it on correctly
e) why it is important to leave the changing room in a tidy condition
f) why it is important to complete documentation accurately and legibly
g) when and who to pass information to
h) your personal responsibilities with regard to health, safety and environment at work
i) how to deal with typical problems and who to report unsolvable problems to
j) what documentation to use and what information needs to be recorded

ELEMENT 1.8.2 Work correctly in aseptic or clean room conditions

In carrying out this work you must:

1. Select samples for in process checking according to **instruction**s at specified intervals
2. Check and document the results of the in process checks accurately
3. Transfer the information to the appropriate person/department
4. Deal with breakages and machine breakdowns according to standard company procedure
5. Maintain the sterility of the materials/products during breakdown
6. Clear away any damaged or unusable materials/products
7. Dispose of waste according to policy guidelines
8. Complete any **documentation** clearly and accurately
9. Deal promptly with any **problems** in the procedure that are your responsibility
10. Inform the appropriate person of any **problems** you cannot solve and/or are not your

responsibility

11. Work safely at all times with regard to **materials**, equipment and personal safety
12. Complete all necessary **documentation**

To do this you need to know

a) how to select samples correctly
b) how to document and check the results of the samples
c) who to transfer the information to
d) how to deal with breakages and breakdowns in the aseptic /clean room
e) how to maintain the sterility of the product during breakdown
f) how to clear away damaged and/or unusable components/materials
g) methods of waste disposal
h) what types of problem may occur and how to deal with them
i) when and how to take corrective action
j) who to inform if you cannot solve a problem and/or it is not your responsibility
k) your personal responsibilities with regard to health, safety and environment
l) methods of documentation that are used

Commentary for Unit 1.9:

Filling and packing materials and products

This unit addresses the competence required to prepare, fill, pack and clear the product and/or material away. This involves:

- preparation of materials, product and /or system
- filling and packaging of the product
- clearing the product away
- working in ways which maintain your own and other's safety

There are three elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.9.1 Prepare materials, product and system
1.9.2 Produce packaged product
1.9.3 Shut down and clear away

There is also a glossary of terms which appear within the unit and have a specific meaning.

Assessment Strategy Statement

In the context of N/SVQ assessment, the use of simulation is not acceptable in the assessment of this unit to cover the full scope as defined by the glossary of the unit. Workplace performance evidence is mandatory for this unit.

Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials/ products

May include solids, liquids and gases.

Methods of movement

These may be expected to include:

- by mechanical transport(incl fork-lifts, hoists)
- by automatic transfer route through the plant
- by hand

Packing/filling operations

These may include:

- warmed product operations
- fluidised product operations
- straightforward packing operations

Packing/filling request

The set of instructions which describe the work to be carried out. May include the packing order, work order, batch card and/or, recipe. Small scale or bulk. Including all relevant data on :

- equipment,
- product
- packaging.
- weights
- fills
- packing densities
- machine settings

Equipment

To include reliable equipment with basic instrumentation. PPE to be specified, when necessary.

.

Problems

These can relate to either , equipment, materials, records or specifications. The person carrying out this work would be expected to resolve any equipment problem for which maintenance engineers are not required. Where a problem does require a maintenance engineer, the person would be expected to report the problem to a more senior person.

Corrective actions

May include adjust, replace defective materials, request assistance or shutdown

Documentation

Includes records, specifications, and any other relevant documentation.

Waste	Including ways of minimising waste in the process, and may include acceptable re-cycling within the operation
Health, safety and Environmental legislation	To include all relevant legislation and company policy.

ELEMENT 1.9.1 Prepare materials, product and system

In carrying out this work you must:

1. Check that you have the required **packing/filling request** and that it is clear and complete
2. Ensure that there are sufficient quantities of **materials/products** to meet requirements
3. Ensure that the **materials/products** to be packaged/filled are checked
4. Unload and store **material/product** until required
5. Ensure that all records are completed accurately and legibly
6. Check that location is ready to receive **materials/products**
7. Prepare the **materials/products** for packaging/filling according to **packing/filling request**
8. Check that the **equipment** to be used is in a safe and functional condition
9. Deal promptly with any **problems** that arise, reporting any which you cannot solve
10. Follow safe working procedures when using **equipment** and dealing with hazardous materials
11. Complete the preparations within the required time

To do this you need to know

a) the meaning of terms used in packing/filling requests
b) methods of packing and filling materials/products
c) the functions and uses of the different types of equipment used in packing/ filling operations
d) the different handling characteristics of materials/products
e) why it is important to check that the location is ready to receive the materials/products
f) how to handle packaging/filling equipment safely to protect yourself and others
g) your personal responsibilities are with regard to health, safety and environment
h) what personal protective equipment to use and why
i) what corrective action to take on discovering defective materials, products and/or equipment
j) who to report to if you cannot solve a problem
k) what documentation to use and what information needs to be recorded

ELEMENT 1.9.2 Produce packaged product

In carrying out this work you must:

1. Check that you have the required **packing/filling request** and that it is clear and complete
2. Ensure that **equipment** is clean, safe and ready for use

3. Make sure that **materials/products** are verified against the **packing/filling request**
4. Ensure that **conditions** are suitable for the type of **material/product** to be dispensed
5. Ensure that stocks of **materials/products** are maintained
6. Wear appropriate **PPE** if required
7. Deal promptly with any **problems** in the procedure that you can solve
8. Inform the appropriate person of any **problems** you cannot solve and/or are not your responsibility
9. Work safely at all times with regard to **materials/products equipment** and personal safety
10. Remove the **product/material** to the right location at the right time
11. Re-cycle and minimise waste
12. Complete relevant records and **documentation** correctly

To do this you need to know

a) the meaning of terms used in requests for packing/filling operations
b) the handling characteristics of different types of materials to be packed/filled, including hazardous if appropriate
c) why it is important that materials/products are checked against the request
d) methods of packing/filling
e) different types of equipment used in the operation
f) what the consequences are of incorrect packing/filling
g) what corrective action to take with problems
h) what location to remove the product/material to after the operation
i) your personal responsibilities are with regard to health, safety and environment
j) how to minimise waste
k) what could be re-cycled and when it is acceptable
l) when and why PPE needs to be worn
k) methods of documentation that are used, and the importance of completing correctly

ELEMENT 1.9.3 Shut down and clear away

In carrying out this work you must

1. Ensure that all **filling/packing request** has been completed
2. Use appropriate procedures to stop operation safely and correctly
3. Check **products/materials** against the **filling/packing request**
4. Move finished product and remaining stocks to correct location
5. Ensure that when required **equipment** is dismantled according to standards operating procedure
6. Ensure that **equipment** is cleaned if required
7. Re-instate **equipment** if required
8. Deal promptly with any **problems** that arise, reporting any which you cannot solve
9. Follow safe working procedures at all times

10. Complete any relevant **documentation** correctly

To do this you need to know

a) the meaning of terms used in requests for filling/packing

b) methods of checking against the request

c) why it is important to store materials correctly

d) the importance of accurate reconciliation of materials/products

e) why it is important to shut down the operation safely

f) how to follow standard operating procedures if equipment needs to be dismantled

g) when and how to clean and reinstate equipment

h) how to deal with problems

i) who to contact with problems you cannot solve and/or are not your responsibility

j) what your personal responsibilities are with regard to health, safety and environment

k) what hazards may be associated with the operation

l) what documentation needs to be completed and the importance of completing correctly

Commentary for Unit 1.10:

Packing the product by hand

This unit describes the activities and understanding you will need to demonstrate that you are able to pack products by hand. You will need to demonstrate and explain how you: commence packaging run; pack product; hand over operation; stop packaging run. To perform competently, you will need to show that you can pack product by hand in a range of conditions. You will need to demonstrate therefore that you can deal effectively with the following:

- visual checks of packs, product security and safety
- procedures relating to legal requirements and quality standards
- problems with equipment, materials and packs
- primary, secondary or tertiary packs
- face to face hand overs, within teams or with someone in another team, during the working period and at the end of the working period
- documentation referring to packaging and packaging records

There are four elements in this unit, each of which has performance standards and a knowledge base associated with it.

1.10.1 Commence packaging run
1.10.2 Pack product

1.10.3 Hand over operation
1.10.4 Stop packaging run

There is also a glossary of terms which appear within the unit and have a specific meaning.

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*• where safety factors are important
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Glossary of terms

The following terms have a specific meaning in this unit and are highlighted where they appear in the performance standards. In the context of NVQ/SVQ assessment, awarding bodies are required to make sure that a candidate's evidence of performance from the workplace demonstrates that their work is consistent with these terms as defined here.

Materials / packs	To include solids, liquids and gases.
Methods of movement	These can be either: • by mechanical transport(incl fork-lifts,hoists) • by automatic transfer route through the plant • by hand
Specification out, requirements.	The set of instructions which describe the work to be carried including details of the quality, quantity and time
Packing/filling operations	These could include: • warmed product operations • fluidised product operations • straightforward packing operations
Packing/filling request	The set of instructions which describe the work to be carried out. To include the packing order, packaging run, work order, batch card and/or, recipe. Small scale or bulk. Including all relevant data on : • equipment, • product • packaging. • weights • fills • packing densities • machine settings
Equipment	To include reliable equipment with basic instrumentation.

	PPE to be specified, when necessary.
.	
Problems	These can relate to either , equipment, materials, records or specifications. The person carrying out this work would be expected to resolve any equipment problem for which maintenance engineers are not required. Where a problem does require a maintenance engineer, the person would be expected to report the problem to a more senior person.
Corrective actions	May include adjust, replace defective materials, request assistance or shutdown
Documentation	Includes records, specifications, and any other relevant documentation.
Waste	Including ways of minimising waste in the process, and acceptable re-cycling within the operation
Health, safety and Environmental legislation	To include all relevant legislation and company policy.
Personal Protective footwear **Equipment**	Personal Protective Equipment, to include clothing and specified as appropriate for the conditions of work.
Operating Procedures	The set of instructions which describe the work to be carried out, including details of the operating parameters.
Operating Parameters	The condition under which the processing should take place.

ELEMENT1.10.1 Commence packaging run

In carrying out this work you must:

1. Check that the specified services, **equipment** and **materials** are ready for use
2. Complete pre start-up checks
3. Start the **packing/filling operation** without delay
4. Correctly identify and deal with **problems,** reporting those that you cannot solve and or are not your responsibility
5. Wear **PPE** when appropriate
6. Work safely at all times

To do this you need to know

a) the services which are available

b) which pieces of equipment and materials are needed and are in place

c) how to verify against documentation that the materials are correct

d) how to complete product security checks

e) which documents to obtain and when

f) the acceptable time limits for the completion of tasks

g) the procedures for reporting problems

h) the methods of dealing with problems

i) when and how to wear PPE

j) what your personal responsibilities are with regard to health and safety

ELEMENT 1.10.2 Pack product

In carrying out this work you must:

1. Pack products to the correct **specification**
2. Segregate and label correctly **materials** and **packs** which do not meet the **specification**
3. Maintain the required output rates
4. Correctly prepare the packs for transfer
5. Identify and deal with **problems** promptly and correctly
6. Work safely at all times

To do this you need to know

a) how to interpret and identify packaging instructions

b) the procedures for segregating materials and packs

c) what the labelling procedures are

d) how to take and identify samples

e) the rate at which you are expected to work

f) how to monitor and maintain the levels of materials

g) how to make adjustments

h) how to prepare packs for transfer

i) procedures for reporting problems and methods of dealing with problems

j) what your personal responsibilities are with regard to health and safety

ELEMENT 1.10.3 Hand over operation

In carrying out this work you must

1. Describe the current operational status accurately within the acceptable time limits, at the correct time and place
2. Maintain the current operational status after takeover
3. Wear **PPE** if appropriate
4. Work safely at all times

To do this you need to know

a) what information is to be described and in what format

b) how to identify and emphasise significant information

c) the operational quality standards required

ELEMENT 1.10.4 Stop packaging run

In carrying out this work you must:

1. Prepare to stop the packaging run according to the specified **operating procedures**
2. Leave the **equipment** and work area in the appropriate condition
3. Identify and deal with **problems** correctly and promptly
4. Wear **PPE** when appropriate
5. Work safely at all times

To do this you need to know

a) how to prepare to stop the packaging run

b) how to deplete the materials

c) when you should prepare to stop the run

d) how to stop the packaging run according to SOP

e) the acceptable time limits for the completion of tasks

f) the condition in which the area should be left

g) how and where to remove packs and part packs

h) procedures for reporting problems and methods of dealing with problems

i) when and how to wear PPE

j) what your personal responsibilities are with regard to health and safety