SVQ in Process Industries Operations Controlling Process Operations at SCQF level 6

Qualification Reference Number

GT3N 46

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PERSONAL COMPETENCE SUMMARY

Name	Company/Centre
Job Title	GQA Registration Number

Unit Number	Mandatory Units	SCQF Level	SCQF Credit
1.12	Handover in Processing Industries Operations	5	4
1.13	Work Effectively in a Team in Processing Industries Operations	6	4
3.10	Respond to emergencies in processing industries operations	6	5
1.14	Work safely in processing industries operations	5	5
Optional Units Group A (minimum of 4 units required)			
Optional Units Group B (minimum of 1 unit required)			

RELIABLE EVIDENCE: The forms of evidence available include (as appropriate)

Observation in the workplace		Simulation(s)	
Oral assessment of knowledge		Work records	
Written work/assignment		Photographs/Video	
Witness statement(s)		Audio	
Testimonial(s)		Products	
Other (please state)			

	Name and Signature	Date
Candidate		
Lead Assessor		
Internal Verifier		
EQA		

Candidate Photo

INTRODUCTION TO THE QUALIFICATION

Who is this qualification for?

This qualification is aimed at those who undertake work in the processing environment in the chemical, pharmaceutical and nuclear environments, and has been developed from the Processing Industries Operations (PIO) National Occupational Standards (NOS).

It is not expected that all working in these sectors will all carry out the same activities, so the qualification is structured to ensure that there is a high degree of flexibility in the choice of units.

The standard covers the most important aspects of the job. This qualification is at SCQF level 6, and should be taken by those who are fully trained to deal with routine assignments.

What is required from candidates?

Candidates should achieve all 4 mandatory units listed below, plus a minimum of 4 units from Group A and a minimum of 1 unit from Group B.

Unit Number	Mandatory Units	SCQF Level	SCQF Credit
1.12	Handover in Processing Industries Operations	5	4
1.13	Work Effectively in a Team in Processing Industries Operations	6	4
3.10	Respond to emergencies in processing industries operations	6	5
1.14	Work safely in processing industries operations	5	5
Optional group A (a minimum of 4 units required)			
3.1	Control Room Operations in Processing Industries Operations	7	7
3.3	Prepare for Complex Processing Operation in Processing Industries Operations	6	7
3.4	Control, Maintain and Restore Complex Processing Operation in Processing Industries Operations	6	10
3.5	Complete a Complex Processing Operation in Processing Industries Operations	6	7
3.6	Contribute to the Maintenance of Product Quality in Processing Industries Operations	6	8
Optional group B (a minimum of 1 unit required)			
2.10	Clean and Prepare Complex Items of Plant and Equipment for Production in Processing Industries Operations	6	6
2.14	Ensure Your Own Actions aim to Protect the Environment in Processing Industries Operations	6	4
3.2	Control Emergencies and Critical Situations in Processing Industries Operations	7	8
3.7	Plan to Maintain Product Integrity in Processing Industries Operations	7	17
3.9	Allocate Personnel to Maintain Processing in Processing Industries Operations	6	6
3.11	Solve Process Problems in Processing Industries Operations	7	9
3.12	Enable Individual Learning Through Coaching in Processing Industries Operations	6	4
3.13	Conduct an Assessment of Risks in the Workplace in Processing Industries Operations	7	7
3.14	Identify Improvements to Energy Efficiency in Processing Industries Operations	7	6
3.15	Enable Learning Through Demonstrations and Instruction in Processing Industries Operations	6	4
1.8	Work in aseptic or clean room conditions in processing industries operations	6	6
2.11	Start the packaging operations in processing industries operations	6	5
1.9	Fill and pack materials and products in processing industries operations	6	6

2.12	End the packaging operations in processing industries operations	6	5
2.8	Sample and test materials in processing industries operations	6	6

Assessment Guidance

Evidence should show that the candidate can cover the scope of performance outlined for each relevant unit consistently over an appropriate period of time.

Types of evidence:

Evidence of performance and knowledge is required. Evidence of performance should be demonstrated by activities and outcomes, and should be generated in the workplace only, unless indicated under potential sources of evidence (see below). Evidence of knowledge can be demonstrated through performance or by responding to questions.

Potential sources of evidence:

The main sources of evidence for each unit will be observation of performance and questions to show underpinning knowledge. This can be supplemented by the follow ing types of physical or documentary evidence:

- Work products
- Organisational documentation
- Audio/photographic/video
- Delivery records
- Witness testimony
- Professional Discussion
- Inspection reports
- Notes and memos
- Candidate statements
- Organisational reports
- Simulation of accident or emergency

Please Note that photocopied or downloaded documents such as manufacturers' or industry guidance, H&S policies, Risk Assessments etc, are not normally acceptable evidence for GQA qualifications unless accompanied by a record of a professional discussion or Assessor statement confirming candidate knowledge of the subject. If you are in any doubt about the validity of evidence, please contact your GQA External Quality Advisor.

GQA QUALIFICATION IMPLEMENTATION REQUIREMENTS COVERING CENTRE APPROVAL, CANDIDATE ASSESSMENT AND ONGOING QUALITY ASSURANCE

This document indicates the requirements of Approved Centres delivering GQA qualifications and / or units of credit.

1. Equality of Opportunity

Equality of access to fair and valid assessment is necessary for all candidates undergoing assessment. This may mean making reasonable adjustments to normal assessment methods for candidates with particular or special assessment requirements. Candidates work patterns should not become a barrier to assessment, the organisation of which may have to be flexible. In the same way, reasonable adjustment arrangements may be necessary for candidates with a disability. For example, a candidate who is unable, through disability, to produce oral or written evidence, may be allowed to use the method they normally use as a substitute for the required form of communication. Reasonable adjustments need to be approved by GQA.

2. Recognised/Approved Assessment Centres

2.1 Individual centres must be approved by GQA to offer specific qualifications and / or units of credit. A centre may be a single organisation or a partnership of two or more organisations. It may operate at a single location or have satellites. For further details see the GQA booklet “Guide to Centre Approval”. The Centre Approval process is carried out by a GQA approved EQA. Each Centre must maintain a centre file. It is important to be clear what the steps in the assessment process are:

- plan evidence collection and opportunities for assessment
- collect evidence
- judge evidence
- determine whether sufficient evidence has been presented
- make an assessment decision and give feedback to the candidate

NB Any deviation from the norm must be approved by a GQA EQA

2.2 Assessors and Verifiers

All Assessors of candidate performance must be competent, to make qualitative judgements, both in the skills they are assessing and in the assessment of candidates and hold the appropriate Assessor national award. Assessor occupational knowledge related to the qualifications being assessed is essential and must be illustrated to GQA prior to approval.

Internal Verifiers are responsible for the quality assurance of the assessment process within a centre. They should have a relevant occupational background, be competent in internal verification and hold the Internal Verifier national award. It is recommended that Internal Verifiers work towards national recognition of assessor competence.

EQAs are responsible for ensuring accurate and consistent standards of assessment across centres, qualifications, units of credit and over time. They should have a relevant occupational background, be competent in external quality assurance and hold the EQA national award.

GQA will approve and licence all individuals involved in the assessment and verification of its approved qualifications and / or units of credit. Individuals who are working towards the Assessor or Internal Verifier national awards can only

be provisionally licensed. The judgement of provisional licence holders will need to be agreed/authorised by a fully qualified and GQA licensed individual who cannot carry out a dual role in relation to a specific candidate.

All GQA Assessors and Verifiers must undertake a minimum of 2 significant CPD activities in both occupational areas and assessment and verification. Reflective CPD records must be maintained and made available to GQA EQAs for review.

2.3 Centre Approval, Monitoring Reviews and Quality Assurance

The centre recognition/approval process is the start of a significant part of the awarding body's quality assurance system. The Approval process will begin with an EQA review of centre procedures to ascertain the potential centres ability to deliver GQA qualifications and / or units of credit. Centres will be expected to meet the relevant regulatory authority criteria for delivery of qualifications prior to initial approval; continued compliance with the criteria will be monitored through regular EQA visits. It is recommended that centre reviews are conducted at minimum every six months by a GQA EQA.

New or multi-site centres may be required to undertake quarterly or more frequent EV reviews to ensure that different locations can be seen to satisfy the national requirements.

GQA will ensure that unacceptable barriers relating to the assessment and internal verification of candidates in small companies do not deny recognition of competence to competent young workers. In such circumstances, GQA will demonstrate that its quality assurance procedures remain sufficient and rigorous to ensure that the competence outcomes have standing and credibility in the occupational area.

Enhanced quality procedures to ensure consistency of assessment and verification will be necessary and will include:

- a high level of sampling of assessment decisions N.B. In some instances the EQA may visit each assessment location and qualification / unit of credit candidate (e.g. single candidates dispersed throughout different small companies on government funded programmes)
- an in-depth scrutiny of assessment plans, materials and records
- specific centre guidance aimed at the successful implementation of qualifications and / or units of credit in SMEs via approved centre partnerships. This can include guidance on the quantity and quality of valid, authentic, and transferable evidence expected to be attributed to individual candidates
- ensuring centres are following the requirements prescribed in any appropriate assessment strategies and applicable codes of practice
- the identification and publication of good practice in centres

As part of the Quality Assurance process Proskills require an Enhanced External Verification process. This will be in the form of 1 significant underpinning knowledge question answered by the candidate for each unit of the qualification. The questions will be decided by GQA, and guideline answers must be submitted for approval and once approved kept in the Centre File to allow independent assessment

3. Qualification / Unit of Credit Candidates

All candidates must register with a GQA recognised/approved centre. The centre must maintain appropriate candidate personal details for external audit purposes etc.

The centre will provide candidates with advice and guidance on how to prepare for assessment and allocate an Assessor who will assess candidate ability to meet the requirements of the relevant qualifications / unit of credit. It is the candidate's responsibility to demonstrate competence and to do this they must:

- prove they can consistently meet all the qualification and / or unit of credit criteria
- provide evidence from work, that they can perform competently in all the contexts specified in the qualification / unit of credit requirements

- prove that they have the knowledge and understanding required to perform competently, even where they have not provided evidence from the workplace

It is therefore critical that quality evidence is provided in a format to allow the Assessor to make a decision and for the Internal Verifier to audit/verify his/her decision.

4. Evidence

A qualification and / or credit is awarded when a person has achieved the necessary outcomes of the qualification and / or unit of credit.

The specific combination of units necessary to achieve a qualification is detailed in the qualification structure.

Certificates of Unit Credit can be awarded when candidates achieve any one, or more, units from the qualification. The evidence the candidate brings forward is primarily evidence of performance of what he/she can do, not just what he/she knows. The assessment criteria / qualification requirements are described within the qualification and / or unit of credit itself and can incorporate practical skills and knowledge.

The assessor's role is to judge each relevant item of evidence. Each must be judged against the qualification and / or unit of credit requirements. It is not sensible to collect evidence against individual criteria. Nor is it effective. If items of evidence were collected for each of the criteria, the candidate may have to produce many items of evidence, well above the number actually required. GQA recommend holistic assessment.

When judging each item of evidence, the assessor is deciding whether the evidence:

- is authentic – i.e. actually produced by the candidate
- meets the criteria
- relates as appropriate to a context defined within the qualification and / or unit of credit
- confirms that the candidate has the required underpinning knowledgenin the qualification and / or unit of credit over time and range of work. The assessor must judge how long a time period is enough to be confident that the candidate can perform reliably to the standard. Unsupported evidence i.e. based on a single assessment/visit will not normally prove consistency.

When the assessor makes a decision about the candidate's competence, he or she examines all the evidence available to determine:

- if the evidence, as a whole, covers all the evidence of achievement
- whether the evidence indicates consistency in competent performance
- whether there is enough evidence on which to base an inference of competence The answer can only be:
- yes (the candidate is competent)
- no (the candidate is not yet competent)
- there is insufficient evidence to make a decision

Consistency means that the individual is likely to achieve the standard in their work role, in the different activities defined

Performance evidence

Performance evidence can be what the individual actually produces, or the way the individual achieves the standard.

One is called product evidence and the other process evidence.

Product evidence is tangible – you can look at it and feel it. Products can be inspected and the candidate can be asked questions about them.

In order to make a fair and objective assessment, the assessor must be able to answer the question: Is there sufficient evidence that the candidate can consistently meet the requirements of the qualification and / or unit of credit?

Process evidence describes the way the candidate has achieved an outcome – how they went about it. This may be, for example, the way the quality of products is checked or the way customer complaints are handled. This usually means observing the candidate in action.

Performance evidence may cover a number of outcomes. It makes sense to plan evidence collection so that what the candidate does, in the normal course of their job, can be related to different outcomes and units. The activities that clearly link to the qualification and / or unit of credit requirements are the things to concentrate on when planning evidence collection and assessment and when monitoring the candidate's progress. Look for opportunities in the candidate's job when evidence can be collected against a number of units at the same time.

Performance evidence can be:

- Naturally occurring – evidence produced in the normal course of work. Evidence of this sort is usually of high quality and reliable. It is also cost effective to collect naturally occurring evidence
- Taken from previous achievements – the candidate may be able to bring forward evidence from previous work experience to show that they are still competent to the standard.
- Evidence of prior achievement can be used when it can be shown to support a judgment that the candidate can still achieve the standard. So, the assessor must be satisfied that the evidence of prior achievement is sufficiently reliable to justify saying that the candidate is currently competent.
- Simulated – from circumstances specially designed to enable the candidate's performance to be assessed.

Simulation is generally not acceptable.

The exceptions to this are:

- Dealing with emergencies
- Dealing with accidents
- Certain pre-approved real time simulators
- Limited other procedures that cannot be practically performed in the workplace, and for which sufficient evidence can be collected through other means.

NB: It is not always possible or feasible to collect naturally occurring evidence. It is likely that some simulation may be needed, when it may take too long to wait for the evidence to arise e.g. it may be an aspect of performance which occurs infrequently. An example of this may be evidence of how to deal with emergencies i.e. it makes sense to look for evidence from sources other than naturally occurring ones, rather than for, say, waiting for the building to burn down. Centres must obtain GQA EQA approval prior to the use of simulation.

Knowledge evidence

Being able to achieve a standard requires the ability to put knowledge to work. The qualification and / or unit of credit indicates the knowledge each person should use if they are to perform competently.

It should not be necessary to test all of the candidate's knowledge separately; however, any exception to this would be detailed in the relevant Assessment Strategy. Performance evidence could show that the candidate knows what he or she is doing. When this is not the case, or if the assessor is not convinced from the performance evidence, it may be necessary to check the individual's knowledge separately.

Oral or written assessments must clearly provide a suitable means of checking the breadth and depth of an individual's knowledge. Assessors will need to judge the best mix of knowledge evidence according to individual circumstances. Knowledge evidence is useful when deciding the quality of performance evidence, but must not be used in isolation to judge competence or as an alternative to performance evidence. Care must be taken that candidate evidence is auditable and verifiable.

NB: These Qualification implementation guidelines are generic across the full range of GQA qualifications. Further guidance on acceptable evidence on each qualification will be found in the Introduction to the Qualification section of the candidate booklet

SVQ CANDIDATE DECLARATION

Candidate Name……..

Centre/Company Name……...

Assessor(s) Name(s) ……

I acknowledge receipt of this copy of the GQA qualification booklet. The unit structure provides information on which units must be achieved to be awarded the SVQ. The individual units detail the necessary requirements etc that I must achieve. I understand that I will have an important role in preparing for and planning assessments and with guidance from the assessor I will collect and record relevant evidence.

I understand that all evidence should be produced by me or be directly attributable to me.

I have been informed of the appeals system and have been issued with a copy of the appeals procedure, should I want to appeal against any part of the assessment process.

I understand the assessments will be carried out with regard to the company/centre Equal Opportunities Policy.

Candidate Signature ……..

Date …….

Unit 1.12 Handover in processing industries operations (Level 5, 4 Credits)

Unit Overview

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

1. Completion of handover information
2. Communication with incoming operator/s
3. Maintaining the operation of the equipment during handover
4. Accepting and confirming responsibility taken over
5. Maintaining your own and other's safety while working

This standard deals with the following:

1. Follow handover procedure
2. Confirm responsibility accepted

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you know the required handover method
P2 check that you have the necessary permit to work or equivalent, if required
P3 check that you are aware of the current handover situation
P4 check that the handover time is correct
P5 check and confirm that the information contained in the handover situation is correct
P6 ensure that all relevant handover information is given to the incoming operator
P7 handover at the correct time and place
P8 maintain safe and effective operation of the equipment during handover
P9 check that you have the correct handover information
P10 check that you can interpret and understand the handover information
P11 clarify any concerns over the handover information with the appropriate person
P12 check that you have any relevant documentation that you may need to proceed
P13 check that any information is recorded correctly at time of handover
P14 accept and confirm responsibility, by appropriate method, after handover of information, responsibility and/or materials has taken place
P15 check that the permit to work or equivalent, is complete (if necessary)

P16 ensure that security and confidentiality is observed where necessary

P17 wear appropriate PPE

P18 communicate, if required, with relevant personnel

P19 deal promptly with any problems that arise, reporting any which you cannot solve and/or are not your responsibility

P20 follow safe working procedures at all times

P21 complete any relevant documentation clearly and accurately

Knowledge and understanding

You need to know and understand:

K1 handover methods, and specifically the one to be used in the operation

K2 what the current time and handover situation is

K3 the importance of the correct handover time and method

K4 why it is important to complete all documentation clearly and accurately

K5 the consequences of not checking and confirming handover information

K6 why it is important to give the incoming operator all relevant information

K7 the importance of knowing the correct time and place for the handover

K8 how to maintain safe and effective operation of equipment during handover

K9 the importance of communication, keeping others informed during the operation

K10 the importance of confirming that you have the correct handover information

K11 how to interpret handover information

K12 why it is important to clarify any points

K13 what documentation may need to be obtained before proceeding

K14 methods of accepting and confirming responsibility

K15 why it may be important that the permit to work is complete

K16 methods of communication

K17 when it may be important to observe security/confidentiality

K18 your personal responsibilities with regard to health

K19 what personal protective equipment to use and why

K20 the types of problems that can occur and how to recognise and deal with them

K21 who to contact if there is an unsolvable problem and/or it is not your responsibility

Assessor Comments/Feedback

Unit 1.13 Work effectively in a Team in Processing Industries Operations (Level 6, 4 Credits)

Unit Overview

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

1. Those working in isolation, who need to communicate with others
2. Those working in groups
3. Accepting and clarifying responsibilities
4. Providing and receiving support and feedback
5. Working in ways which maintain your own and others' safety

This standard deals with the following:

1. Determine and agree individual responsibilities in working with others
2. Complete work activities in conjunction with others
3. Provide and receive support and feedback

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required authority to complete the required activity

P2 check whether you need to inform others who may be affected by this activity

P3 check that all personnel have received the necessary information

P4 check that all personnel understand and agree to their responsibilities

P5 check that you understand the work activity

P6 ensure that you know and understand your responsibility in the activity

P7 ensure that the activity proceeds as planned

P8 keep other relevant personnel informed of the progress of the activity

P9 take appropriate action when disagreement occurs

P10 identify when assistance is required

P11 give assistance when required if it is within the limit of your authority

P12 give constructive support and feedback to appropriate personnel

P13 receive support and feedback from personnel

P14 if required, communicate with others by the appropriate method

P15 deal promptly with any problems that arise, that are your responsibility

P16 inform the appropriate person of any problems you cannot solve and/or are not your responsibility

P17 follow safe working procedures at all times

P18 work within agreed time schedules

P19 complete any required documentation clearly and accurately

Knowledge and understanding

You need to know and understand:

K1 the definition of authority and responsibility within the organisation

K2 how to check whether you have the required authority

K3 your personal responsibility in the operation

K4 how to check whether others need to be informed

K5 how to check that all parties understand what is required of them (if required)

K6 the method of work activity planned

K7 why it is important that all personnel understand what is required of them

K8 methods of monitoring the activity

K9 how to keep all relevant personnel informed of the progress of the activity

K10 what actions could be taken when disagreement occurs

K11 how to identify when assistance may be required

K12 how to give assistance within your limit of authority

K13 why it is important to give constructive feedback and support in the operation

K14 how to give constructive feedback and support within the organisation

K15 what methods of communication to use and when to use them

K16 the importance of keeping to agreed time schedules

K17 why it is important to deal with problems effectively

K18 what typical problems may arise and how to deal with them

K19 who to inform if you cannot solve the problem and/or it is not your responsibility

K20 your personal responsibilities with regard to health, safety and environment

K21 what documentation needs to be completed

K22 the importance of completing documentation/records accurately and clearly

Assessor Comments/Feedback

Unit 3.10 Respond to Emergencies in Processing Industries Operations (Level 6, 5 Credits)

Unit Overview

This standard addresses the competence required to comply with site/plant emergency procedures. This involves:

1. Raising the alarm once an emergency has been identified
2. Informing others
3. Minimising the effect of an emergency
4. Maintaining your own and others' safety while working

This standard deals with the following:

1. Raise the alarm on discovering an emergency
2. Minimise the effect of an emergency

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 activate the appropriate alarm on discovering the emergency

P2 take action appropriate to the emergency

P3 check the location and type of the emergency

P4 provide accurate details on nature and location of the emergency to emergency services

P5 if necessary, alert other people to the emergency

P6 try to ensure that people do not panic

P7 communicate with relevant people

P8 ensure any action is taken promptly

P9 assess the risk to yourself and others of trying to contain the emergency

P10 if the risk is not increased take appropriate action by following the correct procedure

P11 minimise the effect on the environment by using appropriate techniques

P12 comfort and reassure any casualties in the emergency

P13 give a full and accurate report of the emergency

P14 work safely at all times

Knowledge and understanding

You need to know and understand:

K1 the methods of raising the alarm

K2 why it is important to check on the location of the emergency

K3 how to provide clear and accurate details on the nature and location of the emergency

K4 when and how to alert other personnel to the emergency

K5 why it is important to communicate with relevant others

K6 methods of communication to use

K7 why it is important to try to follow safe working procedures

K8 the importance of taking the appropriate action

K9 the importance of taking immediate action

K10 the consequences of not taking immediate action

K11 ways to minimise panic

K12 why it is important to contain the emergency

K13 how to assess the risk of containing the emergency

K14 methods of containing emergencies

K15 why it is important to assess the risk to the environment

K16 how to minimise environmental damage

K17 how to comfort and reassure casualties

K18 why it is important to give a full and accurate report of the incident

K19 what your personal responsibilities are with regard to health, safety and environment

Assessor Comments/Feedback

Unit 1.14 Work safely in Processing Industries Operations (Level 6, 4 Credits)

Unit Overview

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

1. Workplace health and safety policies
2. Personal presentation
3. Legal and workplace environmental procedures
4. Reporting procedures
5. Maintaining your own and others' safety while working

This standard deals with the following:

1. Minimise the risks to health and safety in the workplace
2. Minimise the risks to the environment in the workplace

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 ensure that you carry out your working practices in accordance with legal requirements

P2 ensure that you follow the most recent workplace policies for your job role

P3 rectify those health and safety risks within your capability and job responsibility limits

P4 pass on any suggestions for reducing risks to health and safety within your job role to the responsible persons

P5 ensure that your personal conduct around the workplace does not endanger the health and safety of yourself or other persons

P6 report any differences between working practices and suppliers'/manufacturers' instructions to the appropriate person

P7 work safely at all times

P8 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

P9 ensure that you follow the up to date legal requirements and workplace environmental procedures for your job role

P10 control those environmental hazards within your capability and job responsibility limits

P11 report promptly environmental hazards which you are unable to deal with

P12 report suggestions for limiting risks to the environment within your job role to the responsible/appropriate person

P13 follow the correct procedures for the handling and disposal of materials and products hazardous to the environment

P14 follow suppliers'/manufacturers' instructions and working practices for the safe use and storage of materials/products and equipment

Knowledge and understanding

You need to know and understand:

K1 your legal duties for health and safety in the workplace as required by the Health and Safety at Work Act 1974 K2 your duties for health and safety as defined by any specific legislation covering your job role

K3 what are safe working practices for your own job role

K4 your scope and responsibility in rectifying risks

K5 what the workplace procedures are for handling risks with which you are unable to deal

K6 methods of identifying risks including direct observation, examining records, or interview

K7 the particular health and safety risks which may be present in your own job role and the precautions you must take

K8 what the specific organisational health and safety policies are covering your job role

K9 the importance of dealing with or promptly reporting risks

K10 who to report risks to, and methods of reporting them

K11 where to find expert advice and guidance

K12 why it is important to follow instructions accurately

K13 the importance of your personal conduct in maintaining the health and safety of yourself and others

K14 what the suppliers' and manufacturers' instructions are for the safe use of equipment, materials and products

K15 what the importance is of your personal presentation in maintaining health and safety of yourself and others

K16 what the specific workplace environmental procedures are which cover your job role

K17 what your responsibilities are for the environment as

K18 your own responsibility for rectifying hazards to the environment

K19 your own limitations, job responsibilities and capabilities

K20 who to report to with hazards which you are unable to deal with

K21 suppliers/manufacturers and workplace instructions for the use and storage of materials and products hazardous to the environment and for the use of equipment

K22 what substances and processes might be categorised as hazardous to the environment

K23 what the procedures are for the correct disposal of hazardous materials

Assessor Comments/Feedback

Unit 3.1 Control Room Operations in Processing Industries Operations (Level 7, 7 Credits)

Unit Overview

This standard addresses the competence required to startup, control, maintain and shutdown the required process by remote control within the control room environment. This involves:

1. Control operations
2. Maintain process conditions by monitoring and adjusting
3. Restore required process conditions
4. Communicating with others
5. Maintaining your own and other's safety while working

This standard deals with the following:

1. Take control of operations
2. Monitor and maintain the process

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required operating instructions and that they are clear and complete

P2 ensure that the operating parameters are set according to the operating instructions

P3 ensure that controls are set correctly as contained in the operating instructions

P4 check that all of the control equipment/system is in a safe and functional state

P5 follow any `handover' procedure before accepting responsibility

P6 follow the correct operating procedure when carrying out control actions

P7 follow the correct sequence of actions when carrying out control actions

P8 ensure that the process operation runs within acceptable limits as specified in the operating instructions

P9 monitor and check the process operation at the required intervals

P10 obtain process data and log accurately

P11 interpret the results and take corrective action where necessary

P12 communicate with other relevant personnel when required

P13 maintain the quality, quantity and time schedule of the process

P14 deal promptly with any problems that arise, reporting any which you cannot solve and/or are not your responsibility

P15 complete any required documentation accurately and clearly

P16 wear appropriate PPE

P17 work safely at all times

P18 observe security and confidentiality when required

Knowledge and understanding

You need to know and understand:

K1 the importance of accepting responsibility

K2 the meaning of terms used in operating instructions

K3 the importance of operating parameters in the process

K4 how to set operating parameters in the control room operation

K5 how to check that the equipment and materials are ready for processing

K6 how to set the controls correctly as specified in the operating instructions

K7 why it is important to check that all controls are set correctly

K8 how to follow the correct operating procedure and sequence of actions when in control

K9 the consequences of not following correct procedures

K10 how to, and the importance of monitoring the process

K11 methods of obtaining process data

K12 how to log process data accurately

K13 how to interpret the data

K14 what corrective action could be taken when appropriate

K15 the importance of communicating systems information to others

K16 methods of communication

K17 how to record and document information accurately

K18 the consequences of not recording accurately

K19 the types of problems that may occur and how to recognise and deal with them

K20 who to report to with unsolvable problems and/or those which are not your responsibility

K21 your personal responsibilities with regard to health, safety and environment

K22 when and why PPE needs to be worn

K23 when and why it may be important to observe security and confidentiality

Assessor Comments/Feedback

Unit 3.3 Prepare for complex processing operation in processing industries operations (Level 6, 7 Credits)

Unit Overview

This standard addresses the competence required to prepare the area and equipment for complex processing. This involves:

1. Preparation of the area, equipment and materials
2. Confirmation of status of equipment
3. Completing necessary documentation
4. Maintaining your own and others' safety while working

This standard deals with the following:

1. Prepare the area, equipment and materials for complex processing 2.

Complete the necessary documentation

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required operating instructions and that they are clear and complete

P2 check that if required, you have the necessary PTW or equivalent

P3 ensure that the operating parameters are established

P4 check that the area and equipment/plant to be used is in a safe and functional condition

P5 confirm the status of the equipment/plant before processing begins

P6 check that the materials to be used are of the correct identity, quality and amount so that processing can begin

P7 begin operation and operate equipment/plant safely

P8 deal with deviations from the specified parameters promptly, minimising loss and damage

P9 communicate, if required, with relevant personnel

P10 check that you have the specified materials for the process operation

P11 confirm and record that the materials are as specified

P12 check that you have all of the relevant documentation to proceed

P13 check that the PTW or equivalent, is completed if required

P14 ensure that the relevant documentation is completed accurately and clearly

P15 record any data accurately

P16 wear appropriate PPE

P17 deal promptly with any problems in the procedure that are your responsibility

P18 record the outcome/solution of the problem accurately

P19 inform the appropriate person of any problems you cannot solve and/or are not your responsibility

P20 work safely at all times with regard to materials, equipment and personal safety

P21 ensure that security and confidentiality are observed where necessary

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in operating instructions

K2 the importance of the permit to work (or equivalent)

K3 how to interpret and check operating parameters

K4 the functions and uses of the different types of equipment used in the operation

K5 the importance of confirming status of plant/equipment

K6 why it is important to check the materials against specification

K7 how to deal with deviations from the norm

K8 why it is important to minimise loss and damage

K9 the importance of communication, keeping others informed during the operation

K10 how to handle equipment safely in ways that protect yourself and others from risk

K11 the importance of confirming materials to be used in the process

K12 what documentation needs to be obtained before proceeding

K13 why it is important that the permit to work is complete

K14 why it is important to complete documentation clearly and accurately

K15 what problems may occur in the operation and how to deal with them

K16 the importance of recording outcomes/solutions to problems

K17 who to report to with unsolvable problems and/or those which are not your responsibility

K18 your personal responsibilities with regard to health, safety and environment

K19 when and why PPE needs to be worn

K20 when it may be important to observe security/confidentiality

Assessor Comments/Feedback

Unit 3.4 Control, maintain and restore complex processing operation in processing industries operations (Level 6, 10 Credits)

Unit Overview

This standard addresses the competence required to maintain the required process conditions by monitoring and adjusting, fault diagnosis and restoration of conditions in the event of problems. This involves:

1. Maintaining process conditions by monitoring and adjusting
2. Restoring required process conditions in the event of significant problems
3. Completing necessary documentation

4. Maintaining your own and other's safety while working

This standard deals with the following:

1. Maintain and control required process conditions
2. Restore required process conditions
3. Confirm quality and complete documentation

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required operating instructions and that they are clear and complete

P2 check that if required, you have the necessary PTW or equivalent

P3 ensure that the operating parameters are set

P4 ensure that equipment/plant and materials are ready for the processing operation

P5 ensure that controls are set correctly as contained in the operating instructions

P6 obtain operation data, and analyse by appropriate method

P7 adjust controls when necessary to produce specified quality and minimise waste

P8 ensure you have the necessary specification and operating parameters

P9 recognise deviations from the specification

P10 identify possible faults and causes of deviations from the specification

P11 investigate all of the possible faults and causes of the problem

P12 identify the faults and causes of the problem

P13 take corrective action to restore Process type

P14 check that the process is operating according to specification and within operating parameters

P15 check that you have all of the relevant documentation to proceed

P16 when required organise the taking of samples at the specified time from the specified place

P17 ensure that the sample is representative

P18 ensure that the correct procedure for processing samples is followed

P19 interpret sample results correctly, and take any necessary action

P20 ensure that the relevant documentation is completed accurately and clearly

P21 wear appropriate PPE

P22 communicate with others when necessary

P23 deal promptly with any problems that arise, reporting any which you cannot solve and/or are not your responsibility

P24 work safely at all times with regard to materials, equipment and personal safety

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in operating instructions

K2 the importance of the permit to work (or equivalent)

K3 how to check that the equipment and materials are ready for processing

K4 the importance of checking materials are as specified

K5 the importance of checking that controls are as specified in the operating instructions

K6 methods of obtaining process data, and how to analyse and interpret the data

K7 how to adjust the process to meet the specified quality

K8 how to handle equipment safely in ways that protect yourself and others from risk

K9 the importance of keeping accurate records for this activity

K10 what deviations may occur from the norm, and how to recognise them

K11 what consequences can occur with deviations from the norm

K12 the importance of remedial action

K13 methods of investigating faults and causes

K14 how to analyse information and identify faults and causes of the problem

K15 how to obtain representative samples and why it is important

K16 how to label samples correctly and why it is important

K17 the correct method/procedure for processing samples

K18 how to interpret sample results

K19 what corrective action to take, if any is needed

K20 how to control the process quality

K21 the importance of minimising waste in the process

K22 the importance of the work specification and operating parameters

K23 how to interpret and check operating parameters

K24 the importance of communication, and of keeping others informed during the operation

K25 what documentation needs to be used and how to complete it

K26 why it is important to complete documentation clearly and accurately

K27 what problems may occur in the operation and how to deal with them

K28 who to report to with unsolvable problems and/or those which are not your responsibility

K29 your personal responsibilities with regard to health, safety and environment

K30 when and why PPE needs to be worn

Assessor Comments/Feedback

Unit 3.5 Complete a complex processing operation in processing industries operations (Level 6, 7 Credits)

Unit Overview

This standard addresses the competence required to complete a complex processing operation. This involves:

1. Prepare to shut down services
2. Shut down of services that are no longer required

3. Confirmation of status of plant and equipment

4. Control of waste and residual materials

5. Completing necessary documentation

6. Informing the relevant people in the organisation

7. Maintaining your own and other's safety while working

This standard deals with the following:

1. Complete a complex processing operation

2. Complete necessary documentation

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required shut down operation instructions and that they are clear and complete

P2 check that the plant/equipment is in an appropriate condition for shut down to commence

P3 ensure that all services not required are shut down according to SOP

P4 confirm that services are isolated

P5 communicate with all relevant personnel that shut down is imminent

P6 inform all relevant personnel when shut down is completed

P7 minimise any loss or damage through the operation

P8 control residual and/or waste materials

P9 place product, residual and/or waste materials in suitably labelled containers ready for removal

P10 clean equipment/plant if necessary ready for next operation

P11 check that you have the correct documentation for the operation

P12 when necessary reconcile residual materials

P13 record all results accurately

P14 report all deviations from specified limits to the appropriate person

P15 ensure that the relevant documentation is completed accurately and clearly

P16 wear appropriate PPE

P17 deal promptly with any problems that arise, reporting any which you cannot solve and/or are not your responsibility

P18 record the outcome/solution of the problem accurately

P19 work safely at all times with regard to materials, equipment/plant and personal safety

P20 ensure that security and confidentiality is observed when necessary

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in shut down operation instructions

K2 how to check that the equipment is ready for shut down to commence

K3 methods of shut down for the operation

K4 the importance of shutting down services not required by sop

K5 the importance of keeping relevant personnel informed

K6 why it is important to minimise any loss/damage during shut down

K7 what containers to place product, residual and waste materials in

K8 how to handle equipment safely in ways that protect yourself and others from risk

K9 the importance of checking that you have the correct documentation

K10 what documentation needs to be obtained

K11 when it is important to reconcile materials

K12 methods of material reconciliation

K13 why it is important to complete documentation clearly and accurately

K14 who to report deviations to

K15 what problems may occur in the operation and how to deal with them

K16 who to report to with unsolvable problems and/or those which are not your responsibility

K17 your personal responsibilities with regard to health, safety and environment

K18 when and why PPE needs to be worn

K19 when it may be important to observe security/confidentiality

Assessor Comments/Feedback

Unit 3.6 Contribute to the maintenance of product quality in processing industries operations (Level 6, 8 Credits)

This standard addresses the competence required to contribute to the maintenance of product quality. This involves:

1. Identifying problems using guidance materials
2. Selecting and carrying out defined procedures to deal with a problem

This standard deals with the following:
1. Carry out quality checks
2. Deal with quality problems according to procedures

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 accurately identify quality requirements from operating/sampling instructions

P2 make the quality checks required in accordance with operating/sampling instructions

P3 communicate effectively at all times

P4 segregate non complying items according to the operating/sampling instruction

P5 label and record appropriately

P6 promptly and correctly identify quality problems

P7 accurately record the details of the problem in the correct records

P8 deal effectively with problems

P9 report any problems that you cannot solve and or and not your responsibility

P10 wear PPE when appropriate

P11 document all information accurately

P12 work safely at all times, following all safety, health and environment (SHE) requirements relevant to the process

Knowledge and understanding

You need to know and understand:

K1 what materials are used in different processes, what happens to them as they are processed, and why they have to be prepared

K2 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

K3 why it is logical to first investigate the most likely causes of a problem, before looking any further, and why it is important to gather sufficient information about a problem before drawing conclusions

K4 the sorts of records kept, how to complete them, where they are stored and who has access to them

K5 what your personal responsibilities are with regard to health and safety

K6 how to deal with typical problems

K7 who to report unsolvable problems to

K8 what quality control measurements are taken with regard to product quality, at what stages are product quality checked, and what quality control systems are in your workplace

K9 when and how to wear PPE

Assessor Comments/Feedback

Unit 2.10 Clean and prepare complex items of plant and equipment for production in processing industries operations (Level 6, 6 Credits)

Unit Overview

This standards addresses the competence required to clean the area and/or equipment to prepare for production.

This standards deals with the following:

1. Clear, clean plant, equipment and area of process
2. Liaise with relevant personnel
3. Confirm the status of plant, equipment and area after cleaning

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required authorisation to proceed

P2 check that you have the specification detailing the work to be carried out

P3 identify correct plant and/or equipment to be isolated

P4 isolate plant and/or equipment according to SOP

P5 if required, dismantle plant and/or equipment correctly

P6 clear and clean all residual materials and/or waste from the area to the required standard

P7 if required re-assemble plant and/or equipment ready for the next operation

P8 ensure that relevant personnel are clear about the nature of the plant/equipment to be maintained

P9 explain to relevant personnel about any problems and current status of the plant/equipment

P10 give warnings as appropriate about specific hazards and/or safety requirements

P11 ensure that when the plant/equipment is received from maintenance you are clear about the work undertaken

P12 ensure that all plant/equipment is confirmed as being clean and operational

P13 check the status of all plant/equipment, identifying any areas of concern

P14 ensure that the condition of all plant/equipment is recorded accurately

P15 confirm that the area is in a suitable condition for the next activity

P16 complete any documentation correctly

P17 wear specified PPE if necessary

P18 deal promptly with any problems that arise, reporting any which you cannot solve and/or are not your responsibility P19 communicate effectively with relevant personnel

P20 work safely at all times with regard to material, equipment and personal safety

Knowledge and understanding

You need to know and understand:

K1 the importance of having the necessary authorisation to proceed

K2 the meaning of terms used in specifications concerned with cleaning

K3 the importance of identifying the correct plant/equipment

K4 methods of isolating plant/equipment

K5 how to handle equipment safely in ways that protect yourself and others from risk

K6 methods of cleaning plant/equipment

K7 how to dismantle and reassemble plant and/or equipment when necessary

K8 how to contact the appropriate maintenance personnel

K9 the importance of communication through the procedure

K10 why it is important to explain about the current status of the plant/equipment

K11 why it is important to give warnings about specific hazards and/or safety issues

K12 why it is important to check that plant and equipment is clean and operational

K13 the importance of checking the status of the plant and equipment

K14 why it is important to identify any `areas of concern'

K15 why it is important to record all information accurately

K16 why it is important to confirm and record the status of the plant and equipment

K17 why it is important to communicate with relevant personnel

K18 your personal responsibilities with regard to health, safety and environment

K19 what personal protective equipment to use and why

K20 the types of problems that can occur and how to recognise and deal with them

K21 who to contact if there is an unsolvable problem and/or it is not your responsibility

K22 methods of documentation that are used

K23 why it is important to complete documentation accurately

Assessor Comments/Feedback

Unit 2.14 Ensure your own actions aim to protect the environment in processing industries operations (Level 6, 4 Credits)

Unit Overview

This standard is about minimising risks to the environment as a result of work activities. It describes the competence required to ensure that:

1. Your own actions do not create any risks to the environment
2. You do not ignore significant risks to the environment
3. You take sensible action to put things right, including reporting risks, and seeking advice

Fundamental to this standard is an awareness and understanding of the impact of working practices on the environment. It is important to have a basic understanding of good practice in protecting the environment. This standard does not assume a person with high level responsibilities for the environment already exists in the workplace.

This standard is for everyone at work (i.e. paid, unpaid, fulltime, part-time). It is about maintaining good practice in day-to-day work activities by identifying the risks, minimising the risks and using resources responsibly. This standard deals with the following:

1. Identify the risks to the environment arising as a result of workplace activities
2. Minimise risks to the environment arising as a result of workplace activities

When identifying risks it is important that you understand how activities at the workplace might affect the environment, how to check your own work activities and work area for any hazards which you or others may bring about and cause to the environment. You should be able to identify those hazards with significant risks which you can safely deal with yourself, and when you must report them to the "responsible person" for attention.

When minimising risks it is important that you show you have taken steps to reduce risks to the environment which have arisen as a result of your action, or action by others with whom you might come into contact with during the course of your work. This covers carrying out tasks in accordance with instructions and the requirements of the workplace.

Performance Criteria

You must be able to:

P1 correctly name and locate the responsible persons in the workplace to whom you should report environmental matters

P2 remain up-to-date on environmentally-friendly working practices which are relevant to your workplace

P3 identify any current working practices in your job role which could cause harm to the environment

P4 identify any materials, products or equipment used in any part if your job role which could cause harm to the environment

P5 report, accurately, any differences between legal and workplace regulations and the actual use of materials or products hazardous to the environment

P6 report, promptly, those hazards which present high risks to the persons responsible for environmental matters

P7 report, concisely and accurately, your environment awareness training needs to the appropriate persons

P8 follow the up-to-date legal requirements and workplace environmental procedures for your job role

P9 control these environmental hazards within your capability and the scope of your job responsibilities

P10 report, promptly, risks to the environment that you are able to deal with

P11 pass on any suggestions for limiting risk/s to the environment to the responsible persons

P12 follow suppliers', manufacturers' and workplace instructions for the safe use and storage of materials and products

P13 follow suppliers', manufacturers' and workplace instructions for the safe use and storage of equipment

P14 follow the correct procedure for handling materials and products hazardous to the environment

P15 follow the correct procedure for disposing of materials and products hazardous to the environment

Knowledge and understanding

You need to know and understand:

K1 relevant aspects of the Environmental Protection Act and relevant regulations which will affect the workplace

K2 your duties for the environment as defined by any specific legislation covering your job role

K3 the particular risks to the environment which may be present in your workplace and/or in your own job role

K4 the importance of remaining alert to the presence of hazards to the environment in the whole workplace

K5 the importance of dealing with or promptly reporting risks to the environment

K6 substances and processes categorised as hazardous to the environment

K7 workplace policies, precautions and procedures relating to controlling risks to the environment

K8 responsibilities for items (materials/equipment) hazardous to the environment in your job description

K9 the responsible persons to whom to report environmental matters

K10 the specific workplace environmental procedures covering your job role

K11 suppliers', manufacturers' and workplace instructions for the use of equipment, materials and products hazardous to the environment

K12 how to use resources and materials effectively and efficiently

K13 working practices for your own job role

K14 correct handling procedures for materials hazardous to the environment

K15 your own responsibility for controlling hazards to the environment

K16 workplace requirements for handling hazards to the environment which you are unable to deal with

Assessor Comments/Feedback

Unit 3.2 Control emergencies and critical situations in processing industries operations (Level 7, 8 Credits)

Unit Overview

This standard is about controlling emergencies and critical solutions. This standard deals with the following:

1. Maintain a state of readiness
2. Control critical situations
3. Co-ordinate the response to emergencies

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries,
Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 effectively access current emergency procedures and report all anomalies
P2 identify all conditions which may affect the emergency response
P3 effectively hand over all safety critical information
P4 correctly take part in drills and exercises
P5 identify developing and existing critical solutions
P6 effectively monitor the situation and minimise risks to personnel, process, plant and equipment
P7 accurately identify and immediately take the actions required to make the situation safe
P8 activate all relevant alarms and take appropriate action to the situation
P9 effectively communicate all relevant information and instructions
P10 clarify and act upon information received
P11 report and record critical information correctly
P12 work safely in accordance with operational requirements

Knowledge and understanding

You need to know and understand:

K1 how to select, use and care for PPE (to include sight/hearing protection, gloves, footwear, hard hats, respirators)

K2 the implications of statutory legislation and organisational requirements

K3 how to interpret operational requirements

K4 emergency procedures for the installation

K5 plant layout and its integration with other processes and systems

K6 the internals of equipment and their function and operation

K7 methods and consequences of isolation and depressurisation

K8 functioning of remote process control (to include instrumentation and logic)

K9 normal operating parameters and their tolerances

K10 how to access and interpret drawings and manuals regarding the plant

K11 the composition and properties of produced fluids and gases (to include toxicity, flammability, specific gravity (SG), temperature)

K12 the reactions taking place and the effect of changes to the physical and chemical properties

K13 the effects of changes in ambient conditions on plant operation

K14 the principles and effect of Hydrocarbon hydrate formation, prevention and dispersion

K15 the operation of and potential implications of the ESD

K16 the operation of and potential implications of the Fire and Gas control systems

K17 the effect and potential implications of loss of any system and its reinstatement

K18 consequences of emissions to the environment

K19 how to access and interpret the status of the appropriate equipment and systems, to include detection; protection; communications; evacuation

K20 how to access and interpret the status of operations and simultaneous operations

K21 how to access and interpret information on weather conditions

K22 how to access and interpret information on the availability of key emergency response personnel

K23 the operations of and potential implications of the Emergency Shutdown control systems

K24 the operation of and potential implications of the Fire and Gas control systems+

Assessor Comments/Feedback

3.7 Plan to maintain product integrity in processing industries operations (Level 7, 17 Credits)

Unit Overview

This standard is for those with responsibility for the detailed planning of sampling and testing procedures which have to be produced as a result of the initial technical plan. This overall technical plan may have been produced by a different person. It describes competences involved in implementing the technical components of the plan. It is designed for technical experts inside the organisation who devise specifications and procedures to be followed when conducting sampling and testing. Sampling and testing procedures may be developed, adapted from existing procedures and standards or existing procedures assessed for their suitability and adopted unchanged. Customers for the plans can be either external to the organisation or internal, e.g. other departments within the organisation. The standard states the competences required in:

1. Defining what constitutes a representative sample
2. Establishing the conditions for sampling
3. Developing a sampling procedure
4. Identifying the properties to be tested for
5. Developing a testing procedure

Possible contexts in which these competences could be used include:

1. Establishing a procedure for sampling effluent levels
2. Developing procedures for where and how materials will be tested for strength
3. Selecting test procedures to apply to new materials being prepared for an external customer

This standard deals with the following:

1. Plan sampling requirements
2. Plan testing requirements

Performance Criteria

You must be able to:

P1 accurately define the characteristics of a representative sample

P2 define the conditions under which the sample is to be obtained

P3 accurately assess the appropriateness and accessibility of the sampling site

P4 decide the sampling points and frequency of sample taking in order to provide a representative sample P5 identify appropriate equipment

P6 identify appropriate sampling procedures and incorporate into testing plan

P7 incorporate into the plan the procedures for maintaining the integrity of the sample

P8 define with testing plan the system for correct disposal of sample in accordance with safe operating procedures

P9 make plans to deal with contingencies during sample taking

P10 ensure sampling methodology meets customer requirements

P11 define properties to be tested for

P12 specify appropriate equipment

P13 accurately quantify resource requirements for testing

P14 accurately quantify conditions for testing

P15 ensure sample conforms with test requirements

P16 identify hazards and accurately assess risks

P17 define a system for correct disposal of waste materials

P18 ensure testing plan includes procedures to deal with contingencies during testing

P19 ensure testing plan contains all relevant information in a form usable by others P20

ensure testing methodology meets customer requirements

Knowledge and understanding

You need to know and understand:

K1 principles of planning

K2 safety, health and environmental requirements and procedures for sampling and testing

K3 calibration requirements for equipment

K4 principles of sampling and testing systems and techniques

K5 requirements regarding handling, storage and disposal of materials

K6 the characteristics of a representative sample in terms of correlation of sample to source; variability; properties; size; location

K7 impact of sampling method chosen upon source and sample

K8 extent of required statistical significance

K9 sources and methods of accessing relevant sampling standards

K10 factors influencing integrity of the sample

K11 contingencies and how to deal with them including: equipment failure; delays; limitations to access; changes in variables affecting sample condition; safety and environmental changes

K12 relevant testing methods appropriate to achieve objectives

K13 relevant test resources and their suitability

K14 potential impact of test upon health, safety and the environment

K15 correct disposal: environmental, health and safety procedures

K16 contingencies arising during testing and how to deal with them including: equipment failure; delays changes in variables affecting testing conditions; safety and environmental changes

Assessor Comments/Feedback

3.9 Allocate personnel to maintain processing in processing industries operations (Level 6, 6 Credits)

Unit Overview

This standard addresses the competence required to allocate personnel to ensure the processing operation achieves its objectives. This involves:

1. Planning the work of teams and individuals
2. Providing feedback when necessary for teams and individuals
3. Ensuring planned process objectives are achieved
4. Maintaining your own and others' safety while working

This standard deals with the following:

1. Plan the work
2. Achieve the objective

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required work schedule and that it is clear and complete

P2 check that you have the required objectives and that they are clear and complete

P3 allocate work taking into account team members and/or individuals abilities

P4 ensure the plans and schedules cover all relevant personnel

P5 ensure plans and schedules are realistic and achievable within organisational constraints

P6 check that all team members and/or individuals agree with the plans and schedules

P7 confirm team members and/or individuals agree with, and understand the plans and schedules

P8 communicate, when required, with relevant personnel

P9 deal promptly with any problems that occur in the planning stage of the operation

P10 monitor actual performance

P11 assess the performance against agreed plans and schedules

P12 provide feedback to individuals and/or team members when appropriate

P13 take corrective action when necessary to ensure objectives are met

P14 deal promptly with any problems that arise which may affect the achievement of objectives

P15 inform the appropriate person of any problems which you cannot solve and/or which are not your responsibility

P16 ensure that the relevant documentation is completed accurately and clearly

P17 when appropriate wear PPE

P18 work safely at all times

P19 ensure that security and confidentiality is observed when necessary

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in work schedules

K2 the objectives which need to be achieved

K3 the importance of meeting objectives

K4 how to allocate work taking into account individual's/team member's abilities

K5 the importance of ensuring plans and schedules cover all personnel

K6 what organisational constraints there are and how they may affect the plans and schedules

K7 the importance of gaining agreement

K8 the importance of confirming that individuals and team members agree and understand the plans and schedules

K9 the importance of communication, keeping others informed during the operation

K10 methods of monitoring individuals and teams members performance

K11 how to assess performance

K12 the importance of comparing actual performance against planned performance

K13 methods of providing feedback

K14 the importance of providing constructive feedback

K15 what corrective action to take to meet objectives

K16 typical problems that may occur

K17 how to deal with problems that may affect the meeting of objectives

K18 what documentation needs to be used and how to complete it

K19 why it is important to complete documentation clearly and accurately

K20 who to report to with unsolvable problems and/or those which are not your responsibility

K21 your personal responsibilities with regard to health, safety and the environment

K22 when and why PPE needs to be worn

K23 when it may be important to observe security/confidentiality at times

Assessor Comments/Feedback

3.11 Solve process problems in processing industries operations (Level 7, 9 Credits)

Unit Overview

This standard addresses the competence required to solve process problems. This involves:

1. Finding out the nature of process quality problems
2. Checking out the significance of process quality problems
3. Deciding what action needs to be taken when a problem arises
4. Making sure that the right actions are carried out, either by yourself or by calling on others 5. Assessing how effective the actions taken have been

This standard deals with the following:

1. Determine the nature and significance of process problems
2. Diagnose faults/causes and select solutions to process problems 3. Implement and evaluate chosen solutions

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 promptly identify when a problem has occurred

P2 gather enough information to be able to accurately identify the sort of problem that has occurred

P3 use the correct criteria to decide whether the problem needs immediate action or whether it can be allowed to continue until a more convenient time before dealing with it

P4 use the correct criteria and a logical approach to decide on the likely cause of the problem

P5 use the correct criteria to decide whether the assistance of others will be needed to deal with the problem

P6 wear PPE when appropriate

P7 use all relevant information to help identify possible faults and causes

P8 investigate possible faults and causes of production problems

P9 diagnose possible faults and causes and select appropriate action

P10 take decisions and set them in motion without any unnecessary delay

P11 choose a course of action which will safely limit unwanted effects on the system and process

P12 modify the actions taken if the problem changes or they do not work as intended

P13 provide those carrying out remedial actions with enough detail to ensure that the problem is dealt with fully and effectively

P14 maintain safety standards at all times

P15 implement chosen solution/s within the limits of your authority

P16 chosen a solution that should result in the operating conditions being restored without unduly delaying the schedule, without compromising quality and safety and without wasting resources

P17 gather sufficient information to allow you to accurately monitor how effective a solution is in dealing with the problem

P18 carry out assessments within a sensible timescale according to how quickly the effects of the solution should be apparent

P19 continue with assessments until the problem has been fully resolved

P20 use the correct criteria in evaluating the solution

P21 keep accurate and complete documentation

P22 identify and report any information arising during monitoring which may affect the diagnosis and response to similar problems in the future

P23 make recommendations to the appropriate people based on the information gained from the evaluation

P24 work safely at all times

Knowledge and understanding

You need to know and understand:

K1 what the main functions are of process equipment and systems, how the various parts of a system interact, and what types of services used by process equipment and systems

K2 what materials are used in different processes, what happens to them as they are processed, and why they have to be prepared

K3 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

K4 what should the readings be, what readings to expect and why, what process control involves, the sorts of problems that can arise with the process and what early warning signs there are, what interventions should be applied, when and by whom, what process control records are kept and why it is important that these are complete and accurate

K5 what level of monitoring is required by different processes, what information to gather and when, how to compare data with expected values, the importance of following specified monitoring procedures, and when a process problem should be considered minor and when significant

K6 the sorts of records kept, how to complete them, where they are stored and who has access to them

K7 when and how to wear appropriate PPE

K8 what your personal responsibilities are with regard to health and

K9 what agreed health and safety procedures relate to controlling risks to health and safety and the process the environment K10 what the limits of your authority are

K11 why it is important that the solution results in operating conditions being restored

K12 why it is logical to first investigate the most likely causes of a problem, before looking any further, and why it is

important to gather sufficient information about a problem before drawing conclusions

K13 how to read and analyse relevant data in tables, printouts and schematics, what conventions are used in the process and the units of measurement used and what they mean

Assessor Comments/Feedback

Unit 3.12 Enable individual learning through coaching in processing industries operations (Level 6, 4 Credits)

Unit Overview

This standard addresses the competence required to coach individual learners and/or assist individual learners to apply their learning. This involves:

1. Identifying individual needs and learning styles
2. Choosing the manner and speed of coaching
3. Checking on the progress of learners
4. Giving feedback to learners
5. Reviewing the potential for e-learning support for learners
6. Helping learners to apply their learning
7. Giving ongoing support to learners

This standard deals with the following:

1. Coach individual learners
2. Help individual learners to apply their learning

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 identify individual needs and learning styles

P2 choose a style of coaching which meets the learning objectives of the organisation

P3 coach in a manner and at a speed which is appropriate to learners

P4 analyse the skills needed and the order they need to be learned in

P5 regularly check that learners are making progress towards learning outcomes

P6 give learners positive feedback on the learning process

P7 alter coaching in the light of learners' progress and

feedback P8 give learners the opportunities to practise skills,

apply their knowledge and get experience in a structured way

P9 consider using technology-based support for learners, including esupport

P10 identify opportunities for learners to achieve agreed learning objectives and give them positive feedback on their progress

P11 identify opportunities to use different learning opportunities and agree action with learners

P12 give learners clear and accurate information on the resources available to help them apply their learning

P13 give learners positive feedback on the learning experience and the outcomes achieved

P14 identify anything that prevents learning and review this with learners

P15 explain to learners the ongoing support that is available to them

Knowledge and understanding

You need to know and understand:

K1 how to match coaching opportunities to individual learning needs and objectives

K2 how to put information in order and decide whether the language you will be using is appropriate for individual learners

K3 the separate areas of coaching which encourage learning

K4 which types of learning are best achieved and supported through coaching

K5 how to identify the opportunities available for learners to apply their learning

K6 how to put learners at their ease

K7 how to identify individual learning needs

K8 what the different learning styles are and how they affect learning

K9 how to identify and use different learning opportunities

K10 how to structure learning activities

K11 how to choose and prepare appropriate materials, including technology based materials

K12 how to encourage learners to recognise their own achievements

K13 how to recognise the things that are likely to prevent learning and how to overcome them

K14 how to check learners' understanding and progress

K15 how to make sure that everyone acts in line with health, safety and environmental protection legislation and best practice

K16 how to analyse and use developments in learning and new ways of delivery, including technology-based learning

Assessor Comments/Feedback

Unit 3.13 Conduct an assessment of risks in the workplace in processing industries operations (Level 7, 7 Credits)

Unit Overview

This standard addresses the competence needed to identify hazards in the workplace, assess the level of risk resulting from those hazards, make recommendations to control the risk and review the results. Fundamental to this unit is an understanding of the process of carrying out a risk assessment. A person competent in this standard should be able to carry out risk assessments according to regulatory requirements. This standard is for: a person required to, or who has been asked to, carry out a risk assessment in the workplace. This could be an employer, line manager, supervisor, safety representative or employee.

This standard deals with the following:

1. Identify hazards in the workplace
2. Assess the level of risk and recommend action
3. Review your workplace assessment of risks

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 define clearly, why and where the risk assessment will be carried out

P2 confirm that all the information available to you on statutory health and safety regulations is up-to-date and from recognised and reliable information sources

P3 recognise your own limitations and seek expert advice and guidance on risk assessment when appropriate

P4 select a method of identifying hazards appropriate to the workplace being assessed

P5 ensure your investigation fully identifies those areas in the workplace where hazards with a potential for serious harm to health and safety are most likely to occur

P6 identify hazards which could result in serious harm to others

P7 record those hazards in a way which meets legal, good practice and workplace requirements

P8 report the results of the process to the responsible persons in an agreed format and timescale

P9 work safely at all times

P10 review all legal requirements that are appropriate to your workplace and working practices to ensure effective control measures are in place

P11 confirm that industry standards and all other reasonable precautions are in place

P12 identify hazards that could be eliminated

P13 start your risk assessment for hazards that cannot be eliminated, with those hazards that are most likely to cause serious harm to others

P14 assess the level of risk/s and consider how the risk/s can be controlled to minimise harm

P15 list unacceptable risk/s in priority order including all breaches of relevant health and safety legislation and workplace procedures

P16 prepare a risk/s assessment report containing recommendations for minimising risk/s

P17 present the results of the risk/s assessment to responsible persons in the agreed format and timescale

P18 compare the latest risk/s assessment to current workplace and working practices

P19 identify, accurately, any significant differences between previous and new working practices

P20 investigate the action taken as a result of your recommendations specified in the latest risk assessment

P21 identify, accurately, new hazards arising from changes in the workplace or working practices

P22 make changes to your risk/s assessment in line with the review

P23 inform, promptly, everyone affected by the changes

Knowledge and understanding

You need to know and understand:

K1 your legal duties for health and safety in the workplace

K2 your duties for health and safety as defined by any specific legislation covering your job role

K3 methods of identifying hazards including direct observation, examining records, or interview

K4 hazards that are most likely to cause harm to health and safety

K5 the particular health and safety risks which may be present in your own job role and the precautions to be taken

K6 the work areas and people for whom you are carrying out the assessment

K7 work activities of the people in the workplace where you are carrying out the risk assessment

K8 resources required for a risk assessment to take place

K9 information sources for risk assessments

K10 the importance of dealing with or promptly reporting risks

K11 where to find expert advice and guidance

K12 the responsibilities for risk assessments as required by specific legislation

K13 your own limitations, job responsibilities and capabilities

K14 effective procedures for carrying out a risk assessment

K15 the purpose, legal implications and importance of carrying out a risk assessment

K16 what to do with the results of the risk assessment

K17 how to communicate effectively

Assessor Comments/Feedback

Unit 3.14 Identify improvements to energy efficiency in processing industries operations (Level 7, 6 Credits)

Unit Overview

This standard is about helping the organisation improve its energy efficiency. It covers both identifying opportunities for improvements and making appropriate recommendations. This standard deals with the following:

1. Identify opportunities to improve energy efficiency
2. Recommend improvements to energy efficiency

In order to identify opportunities to improve energy efficiency, you need to review opportunities for improvements in energy efficiency regularly. These opportunities may arise from changes in operational systems and activities, changes in the use of resources, or developments in products, services, technology and best practice. You need to identify external programmes which can support the organisation's energy efficiency initiatives.
You also need to encourage individuals and teams to take an active part in these initiatives.
In order to recommend improvements to energy efficiency, you need to evaluate the opportunities from developments in technology. Energy sources and best practice offer potential improvements to the organisation's systems and activities. You need to make recommendations to individuals and teams based on your evaluations, seeking specialist advice where necessary.

Performance Criteria

You must be able to:

P1 consistently identify developments and advances in energy efficiency best practice which are relevant to the organisation
P2 regularly identify new markets, products, services and technological innovations which offer improvements in energy efficiency
P3 regularly review resources, systems and operational activities to identify opportunities for improved energy efficiency
P4 select and use resources which optimise the use of energy throughout the organisation P5 identify opportunities for recycling energy used for operational activities
P6 identify external programmes which support the organisation's energy efficiency initiatives P7 encourage individuals and teams to identify opportunities which improve energy efficiency and contribute to a sustainable environment
P8 accurately evaluate the advantages and disadvantages to the organisation of possible energy efficiency improvements

P9 assess advances in technology for their applicability to the organisation's systems and activities

P10 accurately evaluate alternative energy sources and suppliers for cost savings and energy efficiency

P11 make recommendations based on your evaluations in line with organisational requirements

P12 seek further advice from appropriate people, where necessary

Knowledge and understanding

You need to know and understand:

K1 the principles and processes of effective communication and how to apply to them

K2 how to identify opportunities for improved energy efficiency

K3 the principal developments and advances in energy efficiency best practice

K4 how to select and use resources which optimise energy use

K5 the range of new markets, products, services and technological innovations relevant to energy efficiency

K6 the principle energy recycling opportunities

K7 the range of external programmes which may support energy efficiency initiatives

K8 the main sources of information on developments in energy efficiency technology and best practice and how to make use of them

K9 the principle of sustainable development and how to work towards it

K10 how to encourage individuals and teams to identify energy efficiency improvements

K11 organisational activities, systems and resources and their impact on energy efficiency

K12 how to assess the advantages and disadvantages of alternative courses of action

K13 how to assess the applicability of technological advances in the field of energy management

K14 how to present advice to individuals and teams

K15 the range of energy efficiency improvements which can be made

K16 the range of energy sources and their features and benefits K17 the range of available and relevant suppliers, tariffs and fuel costs

K18 the operational systems and practices in the organisation

K19 the organisational requirements for providing advice and recommendations

K20 how to decide when further advice is necessary and who to go to

Assessor Comments/Feedback

Unit 3.15 Enable learning through demonstrations and instruction in processing industries operations (Level 6, 4 Credits)

Unit Overview

The standard is appropriate for you if you are involved in activities such as:

1. Demonstrating how equipment is used
2. Showing a learner how to do something
3. Giving learners instructions on what to do or how to carry out a particular activity
4. Deciding when you should use demonstration orinstruction to encourage learning
5. Reviewing the potential use of technology-based learning
6. Checking on the progress of learners
7. Giving feedback to learners

This standard deals with the following:

1. Demonstrate skills and methods to learners
2. Instruct learners

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 base the demonstration on an analysis of the skills needed and the order they must be learned in

P2 ensure that the demonstration is accurate and realistic

P3 structure the demonstration so the learner can get the most out of it

P4 encourage learners to ask questions and get explanation at appropriate stages in the demonstration

P5 give learners the opportunities to practise the skill being demonstrated and give them positive feedback

P6 give extra demonstrations of the skills being taught to reinforce learning

P7 ensure that demonstrations take place in a safe environment and allow learners to see the demonstration clearly

P8 respond to the needs of learners during the demonstration

P9 reduce distractions and disruptions as much as possible

P10 match instruction to the needs of the learners

P11 identify which learning outcomes will be achieved through instruction

P12 ensure that the manner, level and speed of the instruction encourages learners to take part

P13 regularly check that learners understand and adapt instruction as appropriate

P14 give learners positive feedback on the learning experience and the outcomes achieved

P15 identify anything that prevents learning and review this with the learners

Knowledge and understanding

You need to know and understand:

K1 the separate areas of demonstrations which encourage learning

K2 which types of learning are best achieved an supported through demonstrations

K3 how to identify and use different learning opportunities

K4 how to structure demonstrations and instruction sessions

K5 how to choose from a range of demonstration techniques

K6 how to put learners at their ease and encourage them t take part

K7 how to choose between demonstration and instruction as learning methods

K8 how to identify individual learning needs

K9 which factors are likely to prevent learning and how t overcome them

K10 how to check learners' understanding and progress

K11 how to put information in order and decide whether the language you will be using is appropriate for the learners

K12 how to choose and prepare appropriate materials including technologybased materials

K13 the separate areas of instructional techniques which encourage learning

K14 which types of learning are best achieved an supported through instruction

K15 how to make sure everybody acts in line with health safety and environmental protection legislation and best practice

K16 how to analyse and use developments in learning an new ways of delivery, including technology-based learning

Assessor Comments/Feedback

Unit 1.8 Work in aseptic or clean room conditions in processing industries operations (Level 6, 6 Credits)

Unit Overview

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

1. Strict adherence to procedures
2. Preparing to work in aseptic or clean rooms
3. Working correctly in aseptic or clean rooms
4. Maintaining your own and others' safety while working

This standard deals with the following:

1. Prepare for work in aseptic or clean room conditions
2. Work correctly in aseptic or clean room conditions

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required work instructions and that they are clear and complete

P2 ensure that the PPE is correct and complete

P3 follow any scrub up procedures correctly

P4 put on the PPE correctly

P5 leave the changing room in a clean and tidy condition

P6 select samples for in process checking according to instructions at specified intervals

P7 check and document the results of the in process checks accurately

P8 transfer the information to the appropriate person/department

P9 deal with breakages and machine breakdowns according to standard company procedure

P10 maintain the sterility of the materials/products during breakdown

P11 clear away any damaged or unusable materials/products

P12 dispose of waste according to policy guidelines

P13 deal promptly with any problems that arise, reporting any which you cannot solve

P14 follow safe working procedures at all times

P15 complete any necessary documentation clearly and accurately

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in work instructions

K2 how to check that you have the required ppe

K3 what scrub up and personal cleaning procedures need to be completed

K4 how to handle the PPE and put it on correctly

K5 why it is important to leave the changing room in a tidy condition

K6 how to select samples correctly

K7 how to document and check the results of the samples

K8 how to deal with breakages and breakdowns in the aseptic/clean room

K9 how to maintain the sterility of the product during breakdown

K10 how to clear away damaged and/or unusable components/materials

K11 methods of waste disposal

K12 when and how to take corrective action

K13 your personal responsibilities with regard to health, safety and environment at work

K14 how to deal with typical problems and who to report unsolvable problems to

K15 what documentation to use and what information needs to be recorded

K16 when and who to pass information to

K17 why it is important to complete documentation accurately and legibly

Assessor Comments/Feedback

Unit

2.11 Start the packaging operations in processing industries operations (Level 6, 5 Credits)

Unit Overview

This standard describes the activities and understanding you will need to demonstrate to show that you are able to start packaging operations, ensuring that everything is safe and ready to use. The lines used will require a high degree of operator control and problem solving. To perform competently, you will need to show that you can operate in a range of conditions. This standard deals with the following:

1. Ensure readiness of the area and equipment
2. Ensure materials are available
3. Carry out pre start-up checks

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that the area and equipment are cleared and cleaned to the specified procedure

P2 check that the services required to start the packing/filling operation are available

P3 check that the area and equipment have been prepared for use

P4 check that all specified materials are available in the required quantity at the correct time

P5 correctly identify all materials against documentation

P6 ensure that the equipment/line is loaded correctly with the specified materials

P7 produce on a trial basis packs of the correct specification

P8 segregate appropriately materials and packs which do not meet specification

P9 identify and deal with problems correctly

P10 wear PPE when appropriate

P11 complete all documentation required to permit packaging operations with the specified information at the appropriate time

P12 work safely at all times

Knowledge and understanding

You need to know and understand:

K1 the area and the pieces of equipment which should be ready

K2 the specified procedures for clearing and cleaning

K3 how to confirm line clearance

Unit

K4 the services which are required to start the operation

K5 what action to take and whom to inform

K6 how to switch on the equipment

K7 which equipment is to be used and how it should be prepared

K8 which safety devices need to be checked and how to check them

K9 which materials are needed and how much

K10 the quantity of materials which will be needed later

K11 how to interpret the documentation

K12 how to confirm the material status

K13 the importance of identifying the materials correctly

K14 how to load materials correctly, and which materials to use

K15 how to set controls to suitable positions, and the start up procedures

K16 how to carry out calibration checks

K17 how to make tests and adjust the controls to meet specification

K18 how to carry out challenge tests

K19 how to handle recoverable packs and materials correctly

K20 how to handle non-recoverable packs and materials correctly

K22 procedures for reporting problems and methods for dealing with problems

K23 which documents are to be completed and when

K24 standard operating procedures

K25 what your personal responsibilities are with regard to health and safety

K26 what information is needed

K27 where to obtain the documents and to whom they should be given

K28 the prescribed manner for making alterations

K29 when and how to wear PPE

Assessor Comments/Feedback

Unit

1.9 Fill and pack materials and products in processing industries operations (Level 6, 6 Credits)

Unit Overview

This standard addresses the competence required to prepare, fill, pack and clear the product and/or material away.
This standards deals with the following:

1. Prepare materials, product and system
2. Produce packaged product
3. Shut down and clear away

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required packing/filling request and that it is clear and complete
P2 ensure that there are sufficient quantities of materials/products to meet requirements
P3 ensure that the materials/products to be packaged/filled are checked
P4 unload and store material/product until required
P5 check that location is ready to receive materials/products
P6 prepare the materials/products for packaging/filling according to packing/filling request
P7 check that the equipment to be used is in a clean, safe and functional condition
P8 complete the preparations within the required time
P9 ensure that conditions are suitable for the type of material/product to be dispensed
P10 ensure that stocks of materials/products are maintained
P11 wear appropriate PPE if required
P12 remove the product/material and remaining stocks to the right location at the right time
P13 re-cycle and minimise waste
P14 use appropriate procedures to stop operation safely and correctly
P15 ensure that when required equipment is dismantled according to standard operating procedure
P16 ensure that equipment is cleaned if required
P17 re-instate equipment if required
P18 deal promptly with any problems that arise, any which you cannot solve
P19 work safely at all times with regard to materials/products, equipment and personal safety

Unit

P20 ensure that all records are completed accurately and legibly

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in packing/filling requests

K2 methods of packing and filling materials/products

K3 the functions and uses of the different types of equipment used in packing/filling operations

K4 the different handling characteristics of materials/products

K5 why it is important to check that the location is ready to receive the materials/products

K6 how to handle packaging/filling equipment safely to protect yourself and others

K7 what corrective action to take on discovering defective materials, products and/or equipment

K8 why it is important that materials/products are checked against the request

K9 what the consequences are of incorrect packing/filling

K10 what location to remove the product/material to after the operation

K11 how to minimise waste

K12 what could be re-cycled and when it is acceptable

K13 methods of checking against the request

K14 why it is important to store materials correctly

K15 the importance of accurate reconciliation of materials/products

K16 why it is important to shut down the operation safely

K17 how to follow standard operating procedures if equipment needs to be dismantled

K18 when and how to clean and reinstate equipment

K19 what hazards may be associated with the operation

K20 your personal responsibilities with regards to health safety and environment

K21 what personal protective equipment to use and why

K22 how to deal with problems

K23 who to contact with problems you cannot solve and/or are not your responsibility

K24 methods of documentation that are used, and the importance of completing correctly/

Unit

Assessor Comments/Feedback

Unit

2.12 End the packaging operations in processing industries operations (Level 6, 5 Credits)

Unit Overview

This standard describes the activities and understanding you will need to demonstrate to show that you are able to complete the packaging operation, ensuring that the line is left ready for the next use. To perform competently, you will need to show that you can operate in a range of conditions. This unit deals with the following:

1. Finish packaging
2. Prepare packs, materials and waste disposal
3. Reconcile specific materials
4. Ensure clearance of packaging line

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 carry out preparations to finish packaging according to the packing/filling request
P2 achieve the end point according to specified procedures
P3 correctly prepare final packed product/s for removal according to packing/filling request
P4 correctly prepare excess materials for removal
P5 handle waste materials according to the specified procedures
P6 quantify accurately the total amounts of packs and excess materials
P7 complete the reconciliation correctly
P8 ensure that the packaging equipment is in a safe condition for line clearance
P9 locate and remove from the line any unwanted residual materials according to the specified procedures
P10 transfer to storage or dispose of packs, excess materials and waste according to the specified procedures
P11 clear the line according to the specified procedures
P12 follow procedures effectively at all times
P13 identify and deal with problems correctly, reporting those that you cannot solve and/ or are not your responsibility to the appropriate person
P14 wear PPE when appropriate
P15 complete documentation accurately and legibly with the specified information at the correct time
P16 work safely at all times

Unit

Knowledge and understanding

You need to know and understand:

K1 the timescale for the completion of the order or batch

K2 the procedures for finishing and the time needed to do so

K3 the quantities required

K4 how to switch off services and equipment

K5 how to understand packing requests

K6 the total number of packed product/s that should be removed, and how to identify them

K7 methods of stacking packed product/s

K8 how to collate and label excess materials for return

K9 how to check all areas for excess materials

K10 the procedures for collating, quantifying, labelling waste material

K11 what needs to be recorded , and how

K12 the techniques for the safe handling of hazards

K13 which materials should be reconciled

K14 the result of the calculation

K15 what the reconciliation procedures are

K16 how to make the required calculations

K17 when and to whom to refer results outside the specified limits

K18 when and how to wear PPE

K19 what constitutes a safe condition

K20 which services to shut down and how to do it

K21 how to identify what should be removed and why

K22 how to remove packs and excess materials

K23 the correct method for removing waste for disposal

K24 how to transfer to storage

K25 how to dispose of unwanted materials and waste

K26 the requirements for the line after clearance has been completed

K27 procedures for reporting problems and methods for dealing with problems

K28 which documents are to be completed and when

K29 what information is needed

K30 where to obtain the documents and to whom they should be given

K31 security procedures for dealing with documents and materials

Unit

K32 procedures for operating equipment

K33 acceptable time limits for completion and priority order tasks

K34 what your personal responsibilities are with regard to health and safety

K35 the prescribed manner for making alterations

K36 expected standards of hygiene and code of dress

K37 expected standards of tidiness and cleanliness

Assessor Comments/Feedback

Unit 2.8 Sample and test materials in processing industries operations (Level 6, 6 Credits)

Unit Overview

This standard addresses the competence required to sample and test materials used in processing. This includes:

1. Preparing and obtaining a sample
2. Testing the sample
3. Maintaining product integrity at all times
4. Maintaining your own and others' safety while working

This standard deals with the following:

1. Prepare and obtain sample
2. Test the sample

This activity is likely to be undertaken by someone whose work role carries out processing related work activities. This could include individuals working in the following industries, Chemical, Pharmaceutical, Petro-Chemicals and Nuclear.

Performance Criteria

You must be able to:

P1 check that you have the required sampling plan and that it is clear and complete

P2 ensure that equipment to be used is as specified, and in a safe and functional condition

P3 ensure that all required resources are available

P4 ensure that conditions are in accordance with sample plan, and are recorded

P5 ensure that sample is taken in accordance with SOP

P6 deal promptly with any problems that arise, and record appropriately

P7 ensure that any risk assessment is undertaken if necessary

P8 protect sample from all forms of contamination

P9 identify and label sample according to sampling plan

P10 record information as specified in the sampling plan

P11 check that you have the required testing plan and that it is clear and complete

P12 store and label test sample if required

P13 check that the correct sample has been selected

P14 use the appropriate testing procedure in accordance with testing plan

P15 ensure that controlled conditions are as specified in the testing plan

P16 record all results in accordance with testing plan

P17 deal promptly with any problems, deviations, or abnormal occurrences when testing. record and inform the appropriate person

P18 clear any residual materials and/or waste from the testing area in accordance with company policies

P19 ensure that any equipment to be re-used, is cleaned and stored appropriately

P20 wear PPE if necessary

P21 work safely at all times with regard to materials, equipment and personal safety

P22 complete all relevant documentation

Knowledge and understanding

You need to know and understand:

K1 the meaning of terms used in sampling plans

K2 methods of sampling, including standard operating procedure

K3 the handling characteristics of materials to be sampled, including any hazardous

K4 the functions and uses of the different types of equipment used in sampling methods

K5 how to handle equipment safely in ways that protect yourself and others from risk

K6 what corrective action to take on discovering defective conditions, materials and/or equipment

K7 the types of problems that can occur and how to recognise and deal with them

K8 types of labelling used

K9 the meaning of terms used in testing plans

K10 the different types of equipment used in testing

K11 the different methods of testing that could be used

K12 standard operating procedure for testing

K13 what the consequences are of incorrect/adverse conditions

K14 why it is important to check that the correct sample has been selected

K15 methods of storing and labelling test samples

K16 how to record the results

K17 the consequences of abnormal results, and who to inform

K18 methods of clearing residual materials and/or waste

K19 why, when and how the equipment needs to be cleaned and stored

K20 your personal responsibilities with regard to health, safety and environment

K21 when and why to use personal protective equipment

K22 what documentation to use and what information needs to be recorded

Assessor Comments/Feedback

NOTES

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