

# **PMA Chemical, Hydrocarbons and Refining**

## **TRAINING PACKAGE**

**Version 1.00**

## **WA NOMINAL HOURS GUIDE**

## Introduction

This Guide has been generated to enable the stakeholders in this Industry in Western Australia to participate in the managed implementation of the National PMA Chemical, Hydrocarbons and Refining Training Package.

This Guide is designed to aid Registered Training Organisations (RTOs) to convert from existing Training Package qualifications to new Training Package qualifications within the scope of their training delivery.

The Guide should be read in conjunction with the endorsed components of the Training Package.

Version 1.00 of the PMA Chemical, Hydrocarbons and Refining was released by Training.Gov.Au (TGA) on the 02/06/2016.

## Transition Arrangements

Registered Training Organisations (RTOs) are required to deliver Training Package qualifications in accordance with the Standards for RTOs. For further information visit the Training Accreditation Council website [www.tac.wa.gov.au](http://www.tac.wa.gov.au).

## Nominal Hours

Nominal hours are the hours of training notionally required to achieve the outcomes of units of competency.

Nominal hours are identified for nationally endorsed qualifications. Nominal hours may vary for a qualification depending on the selection of units of competency.

In Western Australia, nominal hours are used as a mechanism for funding allocation.

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## Qualifications and Nominal Hours

The following table provides a summary of the qualifications and nominal hours in the industry.

National Code	National Title	Nominal Hours
PMA20116	Certificate II in Process Plant Operations	475
PMA30116	Certificate III in Process Plant Operations	690
PMA40116	Certificate IV in Process Plant Technology	985
PMA50116	Diploma of Process Plant Technology	421
PMA60116	Advanced Diploma of Process Plant Technology	821

## Units of Competency and Nominal Hours

The following table provides a summary of the units of competency and nominal hours in the industry.

National Code	National Title	Nominal Hours
PMAOMIR210	Control evacuation to muster point	20
PMAOMIR301	Undertake initial rescue	60
PMAOMIR302	Respond to a helideck incident	30
PMAOMIR305	Operate panel during an emergency	45
PMAOMIR317	Facilitate search and rescue operations	40
PMAOMIR320	Manage incident response information	40
PMAOMIR321	Manage communication systems during an incident	30
PMAOMIR346	Assess and secure an incident site	30
PMAOMIR407	Audit incident preparedness and established response systems	80
PMAOMIR418	Coordinate incident response	40
PMAOMIR424	Develop and maintain community relationships	30
PMAOMIR430	Conduct and assess incident exercises	35
PMAOMIR444	Develop incident containment tactics	40
PMAOMIR449	Monitor legal compliance obligations during incidents	40
PMAOMIR512	Establish incident response preparedness and response systems	80
PMAOMIR523	Manage corporate media requirements in a crisis	25
PMAOMIR575	Coordinate welfare support activities in response to an incident	30
PMAOMIR622	Build partnerships to improve incident response capacity	30
PMAOMIR650	Manage a crisis	80
PMAOPS101	Read dials and indicators	15
PMAOPS105	Select and prepare materials	15
PMAOPS201	Operate fluid flow equipment	60
PMAOPS202	Operate fluid mixing equipment	20

PMAOPS204	Select and use utilities and services	40
PMAOPS205	Operate heat exchangers	40
PMAOPS208	Operate chemical separation equipment	20
PMAOPS210	Operate solids handling equipment	20
PMAOPS211	Operate manufacturing extrusion systems	30
PMAOPS213	Package product/material	20
PMAOPS216	Operate local control system	40
PMAOPS217	Operate wet milling equipment	40
PMAOPS220	Monitor chemical reactions in the process	30
PMAOPS221	Operate and monitor prime movers	40
PMAOPS222	Operate and monitor pumping systems and equipment	40
PMAOPS223	Operate and monitor valve systems	20
PMAOPS224	Provide fluids for utilities and support	30
PMAOPS226	Monitor and operate flare systems	26
PMAOPS230	Monitor, operate and maintain pipeline stations and equipment	40
PMAOPS231	Control gas odourisation	10
PMAOPS232	Operate filtration equipment	40
PMAOPS233	Monitor wells and gathering systems	30
PMAOPS234	Monitor and operate low pressure compressors	20
PMAOPS236	Monitor continuous process plant	35
PMAOPS240	Store fluids in bulk	30
PMAOPS241	Operate Joule-Thomson effect device	20
PMAOPS242	Moor ships for transfer of bulk processed particulates or fluids	25
PMAOPS246	Operate separation equipment	15
PMAOPS247	Operate powered separation equipment	15
PMAOPS260	Conduct screening operations	25
PMAOPS261	Operate bulk solids loading equipment	25
PMAOPS262	Operate digestion equipment	25

PMAOPS263	Operate leaching equipment	25
PMAOPS264	Operate solvent extraction equipment	25
PMAOPS265	Operate magnetic/electrical separation equipment	25
PMAOPS280	Interpret process plant schematics	20
PMAOPS290	Operate a biotreater	30
PMAOPS300	Operate a production unit	40
PMAOPS301	Operate a distillation unit	40
PMAOPS302	Operate reactors and reaction equipment	40
PMAOPS303	Operate furnaces to induce reaction	40
PMAOPS304	Operate and monitor compressor systems and equipment	30
PMAOPS305	Operate process control systems	60
PMAOPS307	Transfer bulk fluids into/out of storage facility	50
PMAOPS308	Organise storage and logistics of general materials	20
PMAOPS309	Operate solids handling/storage facility	40
PMAOPS312	Undertake ship loading/unloading operations	40
PMAOPS319	Adjust batch	40
PMAOPS320	Conduct artificial lift	20
PMAOPS321	Undertake well management	40
PMAOPS323	Operate and monitor heating furnace	40
PMAOPS324	Operate a gas turbine	50
PMAOPS325	Generate electrical power	30
PMAOPS326	Operate gas absorption unit	40
PMAOPS327	Operate fixed bed adsorption unit	40
PMAOPS329	Operate liquid extraction unit	40
PMAOPS330	Communicate and monitor pipeline activities	40
PMAOPS333	Operate wells and gathering systems	40
PMAOPS335	Conduct pipeline pigging	20
PMAOPS340	Operate cryogenic processes	40

PMAOPS350	Match and adjust colour	40
PMAOPS360	Operate a metalliferous kiln/furnace	35
PMAOPS361	Operate a smelting furnace	35
PMAOPS362	Operate a blast furnace	35
PMAOPS364	Operate an electrochemical process	35
PMAOPS365	Operate pelletising equipment	25
PMAOPS366	Operate sintering equipment	25
PMAOPS390	Operate a biochemical process	40
PMAOPS402	Respond to abnormal process situations	50
PMAOPS405	Operate complex control systems	80
PMAOPS410	Operate remote production facilities	40
PMAOPS411	Manage plant shutdown and restart	40
PMAOPS433	Manage wells and gathering systems	50
PMAOPS434	Commission wells and gathering systems	40
PMAOPS450	Solve colour problems	50
PMAOPS460	Monitor and operate tailings management facilities	45
PMAOPS500	Optimise production systems	100
PMAOPS501	Provide operational expertise to a project team	80
PMAOPS505	Control the process during abnormal situations	80
PMAOPS511	Determine energy transfer loads	40
PMAOPS512	Determine mass transfer loads	40
PMAOPS520	Manage utilities	50
PMAOPS521	Plan plant shutdown	50
PMAOPS522	Coordinate plant shutdown	50
PMAOPS550	Develop a colour formulation	60
PMAOPS560	Plan and design tailings management facilities	70
PMAOPS600	Modify plant	60
PMAOPS601	Debottleneck plant	60

PMAOPS751	Apply physiochemical knowledge to select raw materials for surface coatings	80
PMAOPS752	Develop a decorative coating	60
PMAOPS753	Develop a non-decorative coating or ink	60
PMAOPS755	Provide surface coatings application advice	60
PMASMELT260	Form carbon anodes	40
PMASMELT261	Bake carbon anodes	30
PMASMELT262	Clean and strip anode rods	30
PMASMELT263	Spray carbon anodes	40
PMASMELT264	Start up reduction cells	60
PMASMELT265	Operate reduction cells	60
PMASMELT266	Deliver molten metal	30
PMASMELT267	Cast ingots	40
PMASMELT268	Operate vertical direct casting process	60
PMASMELT269	Operate cell tending equipment	30
PMASMELT270	Supply product from reduction cells	30
PMASUP236	Operate vehicles in the field	20
PMASUP237	Undertake crane, dogging and load transfer operations	40
PMASUP241	Maintain pipeline easements	20
PMASUP242	Monitor pipeline civil works	20
PMASUP243	Monitor and maintain pipeline coatings	20
PMASUP244	Prepare and isolate plant	30
PMASUP245	Break and make flanged joints using hand tools	25
PMASUP246	Disconnect and reconnect non-flared tube fitting joints	25
PMASUP305	Operate offshore cranes	80
PMASUP311	Operate communications hub	40
PMASUP341	Monitor and maintain instrument and control systems	40
PMASUP342	Monitor and maintain electrical systems	40
PMASUP343	Monitor and maintain cathodic protection systems	20

PMASUP344	Monitor and control repairs and modifications on operational pipe	40
PMASUP345	Monitor vibration	60
PMASUP346	Control corrosion	40
PMASUP347	Undertake corrosion inspection on process plant	40
PMASUP410	Develop plant documentation	30
PMASUP420	Minimise environmental impact of process	40
PMASUP432	Coordinate pipeline projects	40
PMASUP440	Commission/recommission plant	40
PMASUP441	Decommission plant	20
PMASUP444	Plan plant preparation and isolation	50
PMASUP445	Participate in HAZOP studies	40
PMASUP520	Review procedures to minimise environmental impact of process	40
PMASUP540	Analyse equipment performance	50
PMASUP620	Manage environmental management system	60
PMAWHS211	Prepare equipment for emergency response	20
PMAWHS213	Undertake fire control and emergency rescue	15
PMAWHS214	Undertake helicopter safety and escape	30
PMAWHS215	Apply offshore facility abandonment and sea survival procedures and practices	20
PMAWHS221	Maintain first aid resources and records	10
PMAWHS310	Investigate incidents	30
PMAWHS311	Lead emergency teams	20
PMAWHS312	Command the operation of survival craft	40
PMAWHS320	Provide advanced first aid response	20
PMAWHS321	Provide first aid response in remote and/or isolated area	25
PMAWHS420	Develop first aid procedures and manage resources	40
PMAWHS502	Contribute to safety case	40
PMAWHS511	Manage emergency incidents	40

## Mapping Qualifications

The following table provides an overview of the qualifications from Version 1.00 which replace qualifications from the existing version of PMA08 Chemical, Hydrocarbons and Refining.

PMA08 Current Qualification				PMA Replacement Qualification		
National Code	National Title	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
PMA20113	Certificate II in Process Plant Operations	475	E	PMA20116	Certificate II in Process Plant Operations	475
PMA30113	Certificate III in Process Plant Operations	690	E	PMA30116	Certificate III in Process Plant Operations	690
PMA40113	Certificate IV in Process Plant Technology	985	E	PMA40116	Certificate IV in Process Plant Technology	985
PMA50108	Diploma of Process Plant Technology	421	E	PMA50116	Diploma of Process Plant Technology	421
PMA60108	Advanced Diploma of Process Plant Technology	821	E	PMA60116	Advanced Diploma of Process Plant Technology	821

## Mapping Units of Competency

The following table provides an overview of the units of competency from Version 1.00 which replace units of competency from the existing version of PMA Chemical, Hydrocarbons and Refining.

PMA08 Current Unit				PMA Replacement Unit		
National Code	National Title	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
PMAOMIR210B	Control evacuation to muster point	20	E	PMAOMIR210	Control evacuation to muster point	20
PMAOMIR301B	Undertake initial rescue	60	E	PMAOMIR301	Undertake initial rescue	60
PMAOMIR302B	Respond to a helideck incident	30	E	PMAOMIR302	Respond to a helideck incident	30
PMAOMIR305A	Operate panel during an emergency	45	E	PMAOMIR305	Operate panel during an emergency	45
PMAOMIR317B	Facilitate search and rescue operations	40	E	PMAOMIR317	Facilitate search and rescue operations	40
PMAOMIR320B	Manage incident response information	40	E	PMAOMIR320	Manage incident response information	40
PMAOMIR321B	Manage communication systems during an incident	30	E	PMAOMIR321	Manage communication systems during an incident	30
PMAOMIR346B	Assess and secure an incident site	30	E	PMAOMIR346	Assess and secure an incident site	30
PMAOMIR407B	Audit incident preparedness and established response systems	80	E	PMAOMIR407	Audit incident preparedness and established response systems	80
PMAOMIR418B	Coordinate incident response	40	E	PMAOMIR418	Coordinate incident response	40
PMAOMIR424B	Develop and maintain community relationships	30	E	PMAOMIR424	Develop and maintain community relationships	30
PMAOMIR430B	Conduct and assess incident exercises	35	E	PMAOMIR430	Conduct and assess incident exercises	35
PMAOMIR444B	Develop incident containment tactics	40	E	PMAOMIR444	Develop incident containment tactics	40
PMAOMIR449B	Monitor legal compliance obligations during incidents	40	E	PMAOMIR449	Monitor legal compliance obligations during incidents	40
PMAOMIR512B	Establish incident response preparedness and response systems	80	E	PMAOMIR512	Establish incident response preparedness and response systems	80
PMAOMIR523B	Manage corporate media requirements in a crisis	25	E	PMAOMIR523	Manage corporate media requirements in a crisis	25
PMAOMIR575B	Coordinate welfare support activities in response to an incident	30	E	PMAOMIR575	Coordinate welfare support activities in response to an incident	30
PMAOMIR622B	Build partnerships to improve incident response capacity	30	E	PMAOMIR622	Build partnerships to improve incident response capacity	30
PMAOMIR650B	Manage a crisis	80	E	PMAOMIR650	Manage a crisis	80

PMAOPS101C	Read dials and indicators	15	E	PMAOPS101	Read dials and indicators	15
PMAOPS105C	Select and prepare materials	15	E	PMAOPS105	Select and prepare materials	15
PMAOPS201B	Operate fluid flow equipment	60	E	PMAOPS201	Operate fluid flow equipment	60
PMAOPS202B	Operate fluid mixing equipment	20	E	PMAOPS202	Operate fluid mixing equipment	20
PMAOPS204B	Use utilities and services	40	E	PMAOPS204	Select and use utilities and services	40
PMAOPS205B	Operate heat exchangers	40	E	PMAOPS205	Operate heat exchangers	40
PMAOPS208B	Operate chemical separation equipment	20	E	PMAOPS208	Operate chemical separation equipment	20
PMAOPS210B	Operate particulates handling equipment	20	E	PMAOPS210	Operate solids handling equipment	20
PMAOPS211B	Operate manufacturing extruders	30	E	PMAOPS211	Operate manufacturing extrusion systems	30
PMAOPS213B	Package product/material	20	E	PMAOPS213	Package product/material	20
PMAOPS216B	Operate local control system	40	E	PMAOPS216	Operate local control system	40
PMAOPS217B	Operate wet milling equipment	40	E	PMAOPS217	Operate wet milling equipment	40
PMAOPS220B	Monitor chemical reactions in the process	30	E	PMAOPS220	Monitor chemical reactions in the process	30
PMAOPS221B	Operate and monitor prime movers	40	E	PMAOPS221	Operate and monitor prime movers	40
PMAOPS222B	Operate and monitor pumping systems and equipment	40	E	PMAOPS222	Operate and monitor pumping systems and equipment	40
PMAOPS223B	Operate and monitor valve systems	20	E	PMAOPS223	Operate and monitor valve systems	20
PMAOPS224B	Provide fluids for utilities and support	30	E	PMAOPS224	Provide fluids for utilities and support	30
PMAOPS226A	Monitor and operate flare systems	26	E	PMAOPS226	Monitor and operate flare systems	26
PMAOPS230B	Monitor, operate and maintain pipeline stations and equipment	40	E	PMAOPS230	Monitor, operate and maintain pipeline stations and equipment	40
PMAOPS231B	Control gas odourisation	10	E	PMAOPS231	Control gas odourisation	10
PMAOPS232B	Produce product by filtration	40	E	PMAOPS232	Operate filtration equipment	40
PMAOPS233A	Monitor wells and gathering systems	30	E	PMAOPS233	Monitor wells and gathering systems	30
PMAOPS234A	Monitor and operate low pressure compressors	20	E	PMAOPS234	Monitor and operate low pressure compressors	20
			-	PMAOPS236	Monitor continuous process plant	35
PMAOPS240B	Store fluids in bulk	30	E	PMAOPS240	Store fluids in bulk	30
PMAOPS241A	Operate Joule-Thomson effect device	20	E	PMAOPS241	Operate Joule-Thomson effect device	20
PMAOPS242A	Moor ships for transfer of bulk processed particulates	25	E	PMAOPS242	Moor ships for transfer of bulk processed particulates or	25

	or fluids				fluids	
PMAOPS246A	Operate separation equipment	15	E	PMAOPS246	Operate separation equipment	15
PMAOPS247A	Operate powered separation equipment	15	E	PMAOPS247	Operate powered separation equipment	15
PMAOPS260A	Conduct screening operations	25	E	PMAOPS260	Conduct screening operations	25
PMAOPS261A	Operate bulk solids loading equipment	25	E	PMAOPS261	Operate bulk solids loading equipment	25
PMAOPS262A	Operate digestion equipment	25	E	PMAOPS262	Operate digestion equipment	25
PMAOPS263A	Operate leaching equipment	25	E	PMAOPS263	Operate leaching equipment	25
PMAOPS264A	Operate solvent extraction equipment	25	E	PMAOPS264	Operate solvent extraction equipment	25
PMAOPS265A	Operate magnetic/electrical separation equipment	25	E	PMAOPS265	Operate magnetic/electrical separation equipment	25
PMAOPS280B	Interpret process plant schematics	20	E	PMAOPS280	Interpret process plant schematics	20
PMAOPS290B	Operate a biotreater	30	E	PMAOPS290	Operate a biotreater	30
PMAOPS300B	Operate a production unit	40	E	PMAOPS300	Operate a production unit	40
PMAOPS301B	Produce product by distillation	40	E	PMAOPS301	Operate a distillation unit	40
PMAOPS302B	Operate reactors and reaction equipment	40	E	PMAOPS302	Operate reactors and reaction equipment	40
PMAOPS303B	Operate furnaces to induce reaction	40	E	PMAOPS303	Operate furnaces to induce reaction	40
PMAOPS304B	Operate and monitor compressor systems and equipment	30	E	PMAOPS304	Operate and monitor compressor systems and equipment	30
PMAOPS305B	Operate process control systems	60	E	PMAOPS305	Operate process control systems	60
PMAOPS307B	Transfer bulk fluids into/out of storage facility	50	E	PMAOPS307	Transfer bulk fluids into/out of storage facility	50
PMAOPS308B	Organise storage and logistics of general materials	20	E	PMAOPS308	Organise storage and logistics of general materials	20
PMAOPS309B	Operate particulates handling/storage equipment	40	E	PMAOPS309	Operate solids handling/storage facility	40
PMAOPS312B	Undertake ship loading/unloading operations	40	E	PMAOPS312	Undertake ship loading/unloading operations	40
PMAOPS319A	Adjust batch	40	E	PMAOPS319	Adjust batch	40
PMAOPS320B	Conduct artificial lift	20	E	PMAOPS320	Conduct artificial lift	20
PMAOPS321B	Undertake well management	40	E	PMAOPS321	Undertake well management	40
PMAOPS323A	Operate and monitor heating furnace	40	E	PMAOPS323	Operate and monitor heating furnace	40
PMAOPS324A	Operate a gas turbine	50	E	PMAOPS324	Operate a gas turbine	50
PMAOPS325B	Generate electrical power	30	E	PMAOPS325	Generate electrical power	30

PMAOPS326B	Produce product using gas absorption	40	E	PMAOPS326	Operate gas absorption unit	40
PMAOPS327B	Produce product using fixed bed dehydration	40	E	PMAOPS327	Operate fixed bed adsorption unit	40
PMAOPS329B	Produce product using liquid extraction	40	E	PMAOPS329	Operate liquid extraction unit	40
PMAOPS330B	Communicate and monitor pipeline activities	40	E	PMAOPS330	Communicate and monitor pipeline activities	40
PMAOPS333A	Operate wells and gathering systems	40	E	PMAOPS333	Operate wells and gathering systems	40
PMAOPS335A	Conduct pipeline pigging	20	E	PMAOPS335	Conduct pipeline pigging	20
PMAOPS340B	Operate cryogenic processes	40	E	PMAOPS340	Operate cryogenic processes	40
PMAOPS350B	Match and adjust colour	40	E	PMAOPS350	Match and adjust colour	40
PMAOPS360A	Operate a metalliferous kiln/furnace	35	E	PMAOPS360	Operate a metalliferous kiln/furnace	35
PMAOPS361A	Operate a smelting furnace	35	E	PMAOPS361	Operate a smelting furnace	35
PMAOPS362A	Operate a blast furnace	35	E	PMAOPS362	Operate a blast furnace	35
PMAOPS364A	Operate an electrochemical process	35	E	PMAOPS364	Operate an electrochemical process	35
PMAOPS365A	Operate pelletising equipment	25	E	PMAOPS365	Operate pelletising equipment	25
PMAOPS366A	Operate sintering equipment	25	E	PMAOPS366	Operate sintering equipment	25
PMAOPS390B	Operate a biochemical process	40	E	PMAOPS390	Operate a biochemical process	40
PMAOPS402A	Respond to abnormal process situations	50	E	PMAOPS402	Respond to abnormal process situations	50
PMAOPS405A	Operate complex control systems	80	E	PMAOPS405	Operate complex control systems	80
PMAOPS410B	Monitor remote production facilities	40	E	PMAOPS410	Operate remote production facilities	40
PMAOPS411B	Manage plant shutdown and restart	40	E	PMAOPS411	Manage plant shutdown and restart	40
PMAOPS433A	Manage wells and gathering systems	50	E	PMAOPS433	Manage wells and gathering systems	50
PMAOPS434A	Commission wells and gathering systems	40	E	PMAOPS434	Commission wells and gathering systems	40
PMAOPS450B	Solve colour problems	50	E	PMAOPS450	Solve colour problems	50
PMAOPS460A	Monitor and operate tailings management facilities	45	E	PMAOPS460	Monitor and operate tailings management facilities	45
PMAOPS500A	Optimise production systems	100	E	PMAOPS500	Optimise production systems	100
PMAOPS501A	Provide operational expertise to a project team	80	E	PMAOPS501	Provide operational expertise to a project team	80
PMAOPS505A	Control the process during abnormal situations	80	E	PMAOPS505	Control the process during abnormal situations	80
PMAOPS511B	Determine energy transfer loads	40	E	PMAOPS511	Determine energy transfer loads	40
PMAOPS512B	Determine mass transfer loads	40	E	PMAOPS512	Determine mass transfer loads	40

PMAOPS520C	Manage utilities	50	E	PMAOPS520	Manage utilities	50
PMAOPS521C	Plan plant shutdown	50	E	PMAOPS521	Plan plant shutdown	50
PMAOPS522A	Coordinate plant shut down	50	E	PMAOPS522	Coordinate plant shutdown	50
PMAOPS550B	Develop a colour formulation	60	E	PMAOPS550	Develop a colour formulation	60
PMAOPS560A	Plan and design tailings management facilities	70	E	PMAOPS560	Plan and design tailings management facilities	70
PMAOPS600C	Modify plant	60	E	PMAOPS600	Modify plant	60
PMAOPS601A	Debottleneck plant	60	E	PMAOPS601	Debottleneck plant	60
PMAOPS751A	Apply physiochemical knowledge to select raw materials for surface coatings	80	E	PMAOPS751	Apply physiochemical knowledge to select raw materials for surface coatings	80
PMAOPS752A	Develop a decorative coating	60	E	PMAOPS752	Develop a decorative coating	60
PMAOPS753A	Develop a non-decorative coating or ink	60	E	PMAOPS753	Develop a non-decorative coating or ink	60
PMAOPS755A	Provide surface coatings application advice	60	E	PMAOPS755	Provide surface coatings application advice	60
PMASMELT260B	Form carbon anodes	40	E	PMASMELT260	Form carbon anodes	40
PMASMELT261B	Bake carbon anodes	30	E	PMASMELT261	Bake carbon anodes	30
PMASMELT262B	Clean and strip anode rods	30	E	PMASMELT262	Clean and strip anode rods	30
PMASMELT263B	Spray carbon anodes	40	E	PMASMELT263	Spray carbon anodes	40
PMASMELT264B	Start up reduction cells	60	E	PMASMELT264	Start up reduction cells	60
PMASMELT265B	Operate reduction cells	60	E	PMASMELT265	Operate reduction cells	60
PMASMELT266B	Deliver molten metal	30	E	PMASMELT266	Deliver molten metal	30
PMASMELT267B	Cast aluminium ingots	40	E	PMASMELT267	Cast ingots	40
PMASMELT268B	Vertical direct casting	60	E	PMASMELT268	Operate vertical direct casting process	60
PMASMELT269A	Operate cell tending equipment	30	E	PMASMELT269	Operate cell tending equipment	30
PMASMELT270A	Supply product from reduction cells	30	E	PMASMELT270	Supply product from reduction cells	30
PMASUP236B	Operate vehicles in the field	20	E	PMASUP236	Operate vehicles in the field	20
PMASUP237B	Undertake crane, dogging and load transfer operations	40	E	PMASUP237	Undertake crane, dogging and load transfer operations	40
PMASUP241B	Maintain pipeline easements	20	E	PMASUP241	Maintain pipeline easements	20
PMASUP242B	Monitor pipeline civil works	20	E	PMASUP242	Monitor pipeline civil works	20
PMASUP243B	Monitor and maintain pipeline coatings	20	E	PMASUP243	Monitor and maintain pipeline coatings	20

PMASUP244A	Prepare and isolate plant	30	E	PMASUP244	Prepare and isolate plant	30
PMASUP245A	Break and make flanged joints using hand tools	25	E	PMASUP245	Break and make flanged joints using hand tools	25
PMASUP246A	Disconnect and reconnect non-flared tube fitting joints	25	E	PMASUP246	Disconnect and reconnect non-flared tube fitting joints	25
PMASUP305A	Operate offshore cranes	80	E	PMASUP305	Operate offshore cranes	80
PMASUP311A	Operate communications hub	40	E	PMASUP311	Operate communications hub	40
PMASUP341B	Monitor and maintain instrument and control systems	40	E	PMASUP341	Monitor and maintain instrument and control systems	40
PMASUP342B	Monitor and maintain electrical systems	40	E	PMASUP342	Monitor and maintain electrical systems	40
PMASUP343B	Monitor and maintain cathodic protection systems	20	E	PMASUP343	Monitor and maintain cathodic protection systems	20
PMASUP344B	Monitor and control repairs and modifications on operational pipe	40	E	PMASUP344	Monitor and control repairs and modifications on operational pipe	40
PMASUP345A	Monitor vibration	60	E	PMASUP345	Monitor vibration	60
PMASUP346A	Control corrosion	40	E	PMASUP346	Control corrosion	40
PMASUP347A	Undertake corrosion inspection in a petrochemical environment	40	E	PMASUP347	Undertake corrosion inspection on process plant	40
PMASUP410B	Develop plant documentation	30	E	PMASUP410	Develop plant documentation	30
PMASUP420B	Minimise environmental impact of process	40	E	PMASUP420	Minimise environmental impact of process	40
PMASUP432B	Coordinate pipeline projects	40	E	PMASUP432	Coordinate pipeline projects	40
PMASUP440B	Commission/recommission plant	40	E	PMASUP440	Commission/recommission plant	40
PMASUP441C	Decommission plant	20	E	PMASUP441	Decommission plant	20
PMASUP444A	Plan plant preparation and isolation	50	E	PMASUP444	Plan plant preparation and isolation	50
PMASUP445A	Participate in HAZOP studies	40	E	PMASUP445	Participate in HAZOP studies	40
PMASUP520B	Review procedures to minimise environmental impact of process	40	E	PMASUP520	Review procedures to minimise environmental impact of process	40
PMASUP540B	Analyse equipment performance	50	E	PMASUP540	Analyse equipment performance	50
PMASUP620B	Manage environmental management system	60	E	PMASUP620	Manage environmental management system	60
PMAOHS211B	Prepare equipment for emergency response	20	E	PMAWHS211	Prepare equipment for emergency response	20
PMAOHS213B	Undertake fire control and emergency rescue	15	E	PMAWHS213	Undertake fire control and emergency rescue	15
PMAOHS214B	Undertake helicopter safety and escape	30	E	PMAWHS214	Undertake helicopter safety and escape	30
PMAOHS215B	Apply offshore facility abandonment and sea survival	20	E	PMAWHS215	Apply offshore facility abandonment and sea survival	20

	procedures and practices				procedures and practices	
PMAOHS221B	Maintain First Aid supplies and records	10	E	PMAWHS221	Maintain first aid resources and records	10
PMAOHS310B	Investigate incidents	30	E	PMAWHS310	Investigate incidents	30
PMAOHS311B	Lead emergency teams	20	E	PMAWHS311	Lead emergency teams	20
PMAOHS312B	Command the operation of survival craft	40	E	PMAWHS312	Command the operation of survival craft	40
PMAOHS320C	Provide advanced First Aid response	20	E	PMAWHS320	Provide advanced first aid response	20
PMAOHS321B	Provide First Aid response in remote and/or isolated area	25	E	PMAWHS321	Provide first aid response in remote and/or isolated area	25
PMAOHS420B	Develop First Aid procedures and manage resources	40	E	PMAWHS420	Develop first aid procedures and manage resources	40
PMAOHS502B	Contribute to safety case	40	E	PMAWHS502	Contribute to safety case	40
PMAOHS511A	Manage emergency incidents	40	E	PMAWHS511	Manage emergency incidents	40

## Apprenticeships

The following table provides a summary of the qualifications in PMA Chemical, Hydrocarbons and Refining and the accredited apprenticeship courses they will replace.

PMA08 Current Qualification					PMA Replacement Qualification		
National Code	National Title	Apprenticeship	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
PMA30113	Certificate III in Process Plant Operations	AP02510: PRODUCTION TECHNICIAN (OPERATIONS)	690	E	PMA30116	Certificate III in Process Plant Operations	690

## Traineeships

The following table provides a summary of the qualifications in PMA Chemical, Hydrocarbons and Refining and the accredited traineeship courses they will replace.

PMA08 Current Qualification					PMA Replacement Qualification		
National Code	National Title	Traineeship	Nominal Hours	E / NE	National Code	National Title	Nominal Hours
PMA20113	Certificate II in Process Plant Operations	TR01490: PROCESS PLANT OPERATIONS (LEVEL 2)	475	E	PMA20116	Certificate II in Process Plant Operations	475
		TR09200: PROCESS PLANT OPERATIONS (MAINTENANCE ENGINEERING) (LEVEL 2)					
		TR11010: PROCESS SUPPORT (LEVEL 2)					
PMA30113	Certificate III in Process Plant Operations	TR08320: PROCESS PLANT OPERATIONS (LEVEL 3)	690	E	PMA30116	Certificate III in Process Plant Operations	690
PMA40113	Certificate IV in Process Plant Technology	TR08330: PROCESS PLANT TECHNOLOGY (LEVEL 4)	985	E	PMA40116	Certificate IV in Process Plant Technology	985
PMA50108	Diploma in Process Plant Technology	TR09210: PROCESS PLANT ADVANCED TECHNICIAN (LEVEL 5)	421	E	PMA50116	Diploma in Process Plant Technology	421