



# PMA Chemical, Hydrocarbons and Refining Training Package Release 2.0

Case for Endorsement (Stage 2)

June 2020

[www.ibsa.org.au](http://www.ibsa.org.au)

[manufacturing@ibsa.org.au](mailto:manufacturing@ibsa.org.au)

(03) 9815 7099

Level 3, 289 Wellington Parade South  
East Melbourne, Victoria, 3002



*Prepared on behalf of the Process Manufacturing, Recreational Vehicle and Laboratory IRC for the Australian Industry and Skills Committee (AISC)*

## **PMA Chemical, Hydrocarbons and Refining Training Package Release 2.0**

### **Case for Endorsement (Stage 2) June 2020 – Activity Order IBSA/TPD/2016-2017/007**

This *Case for Endorsement* has been produced with the assistance of funding provided by the Commonwealth Government through the Department of Education, Skills and Employment.

## Table of contents

<b>A. Administrative details of the Case for Endorsement.....</b>	<b>3</b>
<b>B. Description of work and request for approval .....</b>	<b>3</b>
Draft components for endorsement.....	3
Summary of work, changes and industry benefits .....	3
<b>C. Evidence of industry support .....</b>	<b>4</b>
Written evidence of support .....	4
Project methodology, research and consultation .....	4
Evidence of broader engagement .....	8
Evidence of engagement with State and Territory Training Authorities.....	8
Reports by exception .....	8
<b>D. Industry expectations about training delivery .....</b>	<b>8</b>
Training delivery .....	8
Delivery as an apprenticeship/traineeship .....	9
Credit arrangement .....	9
<b>E. Implementation of the new training packages .....</b>	<b>9</b>
Occupation and licensing requirements .....	9
Implementation issues and management strategy .....	9
Equivalence .....	10
Prerequisites .....	10
<b>F. Quality assurance reports.....</b>	<b>10</b>
Independent quality report .....	10
Declaration.....	10
Companion Volume Implementation Guide .....	10
Statement of evidence against the Training Package Quality Principles .....	11
<b>G. Implementation of the COAG Industry Skills Council reforms to training packages .....</b>	<b>12</b>
Removal of obsolete or superfluous content .....	12
Inclusion of advice about industry's expectations of training delivery .....	12
Support for individuals to move easily from one related occupation to another.....	12
Creation of units that can be owned and used by multiple industry sectors .....	12
<b>H. A copy of the full content of the proposed training package components.....</b>	<b>12</b>
<b>Appendices .....</b>	<b>13</b>
Appendix A: Comparison of Case for Change and components submitted for endorsement.....	13
Appendix B: List of draft components for endorsement .....	14
Appendix C: Letter of support from IRC .....	15
Appendix D: Technical Advisory Committee members .....	16
Appendix E: AQF mapping .....	17
Appendix F: Other participating stakeholders.....	22
Appendix G: State and territory stakeholders consulted .....	23
Appendix H: Credit arrangements .....	24
Appendix I: Quality assurance report .....	25

## A. Administrative details of the Case for Endorsement

The Process Manufacturing, Recreational Vehicle and Laboratory Industry Reference Committee (the IRC) is presenting this Case for Endorsement.

IBSA Manufacturing, a Skills Service Organisation (SSO), is submitting this Case for Endorsement on behalf of the IRC.

This Case for Endorsement is stage 2 of the project that responds to Activity Order IBSA/TPD/2016-2017/007, executed in February 2017. Stage 1 was approved by the Australian Industry and Skills Committee (AISC) at their meeting on 25 February 2020. Stage 1 was the first step in meeting industry requirements to align existing and new units of competency with future job roles at Certificate III level. The following components were endorsement at stage 1:

- Thirty-two (32) units of competency:
- twenty-seven (27) revised units
- five (5) new units.

Stage 2 of the project finalises the alignment of the Certificate III in Process Plant Operations to industry determined job role requirements. This includes:

- development of 15 new units of competency
- addition of specialisations to the Certificate III in Process Plant Operations.

**Appendix A** provides a comparison of requirements in the Case for Change and components submitted for endorsement at stage 1 and stage 2.

The release of stage 1 on the National Register of VET (training.gov.au) was deferred until the release of stage 2. This will limit the disruption to RTOs by reducing multiple releases of Certificate III in Process Plant Operations, which will initiate the transition of the PMA Chemical, Hydrocarbons and Refining Training Package in fairly close succession.

## B. Description of work and request for approval

### Draft components for endorsement

This submission covers the Case for Endorsement for the PMA Chemical, Hydrocarbons and Refining Training Package Release 2.0 Stage 2. In summary, the following components are submitted for endorsement:

- fifteen (15) new units
- one (1) revised qualification.

See **Appendix B** for units of competency submitted for endorsement.

### Summary of work, changes and industry benefits

The primary focus has been to update the Certificate III in Process Plant Operations to reflect current industry needs by developing new units of competency to fill identified skills gaps. Priorities for industry as expressed in the Case for Change related to the need for training package content that ensures:

- components match industry requirements and maximise the training outcomes for the sector



- the PMA Chemical, Hydrocarbons and Refining Training Package continues to be supported by industry
- new components focus on critical skills gaps.

Alongside this objective, the new components are compliant with the *Standards for Training Packages 2012*, including the COAG Industry Skills Council (CISC) reforms to training packages. Opportunities to respond to CISC reforms were proactively identified and tested through consultation.

### Units of competency

The following changes specifically reflect industry needs:

- 15 new units of competency address skills and knowledge gaps and were developed with extensive industry involvement. See **Appendix B**.

### Qualification

The following changes have occurred:

- New PMA units have been added to PMA30120 Certificate III in Process Plant Operations
- Packaging rules for the Certificate III in Process Plant Operations have been amended, and a reduced number of units listed in the elective bank (compared to PMA30116). The following specialisations have been added:
  - Offshore Oil Upstream specialisation
  - Gas/LNG Upstream specialisation
  - Gas/LNG Downstream specialisation
  - Utilities specialisation
  - CSG Plant specialisation
  - CSG Well specialisation
  - CSG Pipelines specialisation.

## C. Evidence of industry support

### Written evidence of support

A fully constituted IRC approved the draft components for submission to the AISC for endorsement. A letter of support from the IRC Chair appears as **Appendix C**.

### Project methodology, research and consultation

The original scope of work approved by the AISC identified the following qualifications for review:

- PMA30116 Certificate III in Process Plant Operations
- PMA40116 Certificate IV in Process Plant Technology
- PMA50116 Diploma of Process Plant Technology
- PMA60116 Advanced Diploma of Process Plant Technology.

This included the review of 81 existing units of competency.

At the time of this project commencing, the liquified natural gas (LNG) industry had commissioned a job role analysis of Certificates III and IV level workers in the LNG sector, with the intention of developing a framework to ensure that future training would meet industry needs. This work resulted in the LNG Framework, which shows the alignment of existing and proposed new units of competency with future

job roles. Industry determined that any approval or acceptance of training package development work hinged on its alignment with the LNG Framework.

Although the LNG sector is the predominate user of the PMA Chemical, Hydrocarbons and Refining Training Package, it is not the only one; industry stakeholders in the coal seam gas (CSG), refining and chemicals sectors also use the training package. Therefore, all stakeholders were engaged throughout this training package development and review process.

The LNG Framework and feedback from industry stakeholders were used to determine current industry issues and priorities, and to identify key areas for the review and development of training package components.

This project focused on units associated with Certificate III in Process Plant Operations only, as this qualification represents the majority of VET-trained workers in industry. Units of competency were reviewed and developed to meet current and best-practice expectations of industry. Aligning the training package development work with the outcomes of the LNG Framework ensures that new units will focus on critical skills required by industry.

Review work and consultation identified that industry also required a restructure of the Certificate III in Process Plant Operations to integrate seven specialisations into the qualification. 15 new units of competency were needed to address the identified skill gaps and were considered through the WA LNG Jobs Taskforce. This taskforce was established in 2019 by the Government of Western Australia to position the state as an LNG hub, with both industry and government working collaboratively to maximise the benefits that flow from the local LNG industry.

Work covered by the current Activity Order was split into 2 stages.

#### **Stage 1:**

- Review and update 27 existing PMA units and develop 5 new units.
  - Based on an updated set of priorities, identified in the LNG Framework and put forward by industry, the 5 units identified for development were changed. This followed feedback, supported by the Technical Advisory Committee (TAC) and IRC, that the focus of the proposed 5 new units of competency on drone technology/remote monitoring was a marginal imperative.
- Update the Certificate III in Process Plant Operations to include the 5 new units of competency in the elective bank.
- Respond to issues raised throughout the consultation processes by focusing on the foundation and technical skills required to work safely while operating and troubleshooting plant and equipment and responding to abnormal situations and incidents in the workplace.

#### **Stage 2**

- Develop remaining new units of competency (15) identified in the LNG Framework.
- Review the Certificate III in Process Plant Operations and develop named specialisations.

### ***Technical Advisory Committee***

A Technical Advisory Committee (TAC) was established to provide specific subject matter advice and technical expertise for the development of the training package components. The TAC for stage 2 was made up of LNG and CSG industry representatives. The organisations represented on the TAC make up a significant proportion of industry stakeholders using the PMA Chemical, Hydrocarbons and Refining Training Package in these sectors. A list of TAC members appears as **Appendix D**.

TAC members were actively engaged throughout the project and met several times in person and by teleconference to discuss draft documents, consider issues presented through public consultation and to provide expert advice. Three TAC meetings were held as follows:

- 21 November 2019 (Perth)
- 12 December 2019 (Perth)
- 30 January 2020 (Perth).

Due to the COVID-19 pandemic and its significant impact on operators in the oil and gas sectors, TAC support for the training package components was confirmed via email.

Although the units of competency were largely geared to the LNG sector, industry stakeholders in the CSG, refining and chemicals sectors that were part of the TAC for stage 1 were regularly updated throughout the project, and directly consulted to confirm the structure of the new Certificate III in Process Plant Operations. An online consultation session was held for these stakeholders during draft 2 public consultation.

### ***Public consultation***

Details about the project were made available on the IBSA Manufacturing website at <https://ibsa.org.au/consultation-project/chemical-hydrocarbons-refining-2017-project-stage-2/> for the life of the project. There were two rounds of public consultation where draft components were available for review and comment via the IBSA Manufacturing website. At the request of industry, a shorter two-week period was approved for draft 1 public consultation.

More than 900 stakeholders were alerted to the availability of the draft content for review and the opportunity to provide feedback.

During the consultation period the project web page had:

- 104 discrete page views during Round 1 public consultation
- 149 discrete page views during Round 2 public consultation.

Feedback received during public consultations was tabled in the Issues Register and considered by the TAC.

### ***Specific issues addressed through consultation***

During the project, the following key issues were raised and addressed in consultation with the TAC and the IRC:

Issue	How addressed by industry
Certificate III not fit for purpose	<ul style="list-style-type: none"> <li>• Certificate III was examined in the context of aligning it with the LNG Framework, with seven specialisations added. The flexibility in unit choice between PMAOPS334 and PMAOPS336 in <i>Group A electives: Offshore Oil Upstream specialisation</i> and <i>Group B electives: Gas/LNG Upstream specialisation</i> recognises different gas processing methods used by industry to remove impurities.</li> <li>• Core units were confirmed as providing a basic understanding of key foundational areas of communication, work health and safety, emergency response and sustainable operations</li> <li>• Technical skills are acquired through elective choices. These have been reduced (compared to PMA30116) to ensure those available are relevant to the job role and provide improved alignment to the Australian Qualifications Framework (AQF). See <b>Appendix E</b> for AQF mapping</li> <li>• Listed electives were confirmed to ensure the qualification remained functional for all users.</li> </ul>
Consistent processes for operating and troubleshooting equipment	<ul style="list-style-type: none"> <li>• New units generally have the same procedural and knowledge requirements for operating and troubleshooting the equipment. Industry provided direction on ensuring that units generally had a consistent approach to operating, shutting down and starting.</li> </ul>
Consistent industry terminology	<ul style="list-style-type: none"> <li>• Terminology was standardised across new units, including, but not limited to: <ul style="list-style-type: none"> <li>○ abnormal situations</li> <li>○ process system</li> <li>○ isolation/de-isolation</li> </ul> </li> </ul>
Foundation Skills	<ul style="list-style-type: none"> <li>• Generally, Foundation Skills were made explicit in the performance criteria. However, industry wanted to emphasise their importance in the Foundation Skills field, irrespective of whether or not the foundation skills were already explicit in the performance criteria. Industry felt that this would ensure that they are not overlooked and promote the best outcomes for learners.</li> </ul>
Performance Evidence	<ul style="list-style-type: none"> <li>• Industry advised that a learner would be required to successfully demonstrate a task twice in separate work contexts in order to be deemed competent. Therefore, performance evidence is stated as: “at least 2 times, each in a separate work context”.</li> <li>• This is consistent across all units and industry provided clarification around expectations for assessment delivery in separate work contexts, as outlined in the Companion Volume Implementation Guide.</li> </ul>
Knowledge Evidence	<ul style="list-style-type: none"> <li>• Industry confirmed that the requirements were appropriate in the new units. Industry also emphasised the need for RTOs to engage with industry to assist in providing clarification of requirements and contexts.</li> </ul>



Issue	How addressed by industry
Assessment Conditions	<ul style="list-style-type: none"> <li>New units focus on the key conditions that must be in place for assessment. Industry confirmed assessment can be in the workplace or in a simulated environment.</li> </ul>

#### Evidence of broader engagement

In addition to the extensive involvement of TAC members, a range of other stakeholders provided expert input to the project. A list of these stakeholders appears in **Appendix F**.

All feedback was considered, and competing views were dealt with through consultation. The outcomes were approved in IRC meetings. There are no outstanding issues from stage 2 development.

#### Evidence of engagement with State and Territory Training Authorities

IBSA Manufacturing has actively engaged with all State and Territory Training Authorities (STAs) throughout the project: providing an initial briefing, maintaining open dialogue and requesting feedback on Draft 1 and Draft/Validation draft components. At the conclusion of the project, STAs were provided with a further opportunity for review and feedback, as provisioned for in the *Training Package Development and Endorsement Process Policy*. No objections were noted, and support was received from the STAs of <TO BE INSERTED>.

**Appendix G** provides list of all state and territory stakeholders consulted during the project.

#### Reports by exception

There are no reports by exception.

## D. Industry expectations about training delivery

#### Training delivery

The Companion Volume Implementation Guide, Release 2.0 includes advice about industry's expectations of training delivery: duration of training, delivery modes and pathways, work-based learning strategies, assessment and information about learner characteristics.

The Certificate III in Process Plant Operations can be delivered over a period of 1–2 years. These expectations are in line with the AQF parameters.

Stakeholders also agree that all learners must have access to a real or simulated workplace environment to practise skills development and for assessment. Assessors must ensure there is variance in assessment conditions when assessments are undertaken as directed in the performance evidence: 'at least twice, each in a separate work context'.

This will apply to both workplace and non-workplace assessments, be they in simulated or real conditions.

Factors that can cause variability include, but are not limited to:

- weather conditions
- environmental factors

- time of day assessments are undertaken
- underpinning causal event
- physical location
- plant/equipment utilised.

Furthermore, industry agreed that in some instances simulated assessment is appropriate as the opportunity to demonstrate performance in the workplace may be uncommon or is related to emergency situations.

Whilst Foundation Skills are generally explicit within the performance criteria of the revised units, key foundation skills have been listed in the Foundation Skills field. This was done under the direction of industry, which wanted to reiterate the importance of workers having these skills and ensuring that training providers could clearly identify key requirements.

Industry highlighted the importance of training providers consulting with employers to ensure industry requirements are addressed. Industry has raised its ongoing problems resulting from the variability of learner outcomes. This includes not just the lack of sufficient skills and knowledge in learners, but also the poor selection of appropriate units in terms of alignment with current job role requirements. This is a major contributor to the addition of specialisations in the Certificate III to ensure specific sector requirements are selected.

#### Delivery as an apprenticeship/traineeship

The Process Manufacturing, Recreational Vehicle and Laboratory IRC recommends the new Certificate III in Process Plant Operations is suitable for a traineeship or apprenticeship pathway.

#### Credit arrangement

**Appendix H** represents existing credit arrangements for those qualifications referenced in this Case for Endorsement

## E. Implementation of the new training packages

#### Occupation and licensing requirements

Units included in this submission include the following statement:

- No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

It is noted that training providers must consult with industry to ensure that current requirements are met.

#### Implementation issues and management strategy

RTOs will need to review their Training and Assessment Strategy (TAS) documentation to take the new units and specialisations into consideration. Implementation issues could arise as training and assessment materials may not be readily available for the new units.

STAs may need to review funding arrangements for the new qualification in their jurisdiction.

## Equivalence

The qualification has been deemed equivalent to PMA30116 Certificate III in Process Plant Operations. Although several new units and specialisations are now specified, the occupational outcome has not changed. This determination of equivalence was also supported by industry.

## Prerequisites

No new units developed in Stage 2 have listed prerequisites.

It is noted that the training package developers are aware that the Certificate III in Process Plant Operations lists the following unit that has a conditional prerequisite:

PMAOPS222	Operate and monitor pumping systems and equipment	PMAOPS221 Operate and monitor prime movers <b>OR</b> PMAOPS324 Operate a gas turbine
-----------	---	--

Although this is a PMA coded unit, it is not part of the current review project. Industry maintains this unit is relevant for the job role.

## F. Quality assurance reports

### Independent quality report

All components have been quality-assured by a Training Package Quality Assurance Panel member and the independent quality report is included as **Appendix I**.

The Companion Volume Implementation Guide has been quality-assured through the IBSA Manufacturing internal process, and through the independent quality assurance process. It is available with this submission and will be available on the VETNet website at: <https://vetnet.education.gov.au> on endorsement.

### Declaration

IBSA Manufacturing, the SSO for the Process Manufacturing, Recreational Vehicle and Laboratory IRC, declares that the proposed training package components meet the requirements of the *Standards for Training Packages 2012*, *Training Package Products Policy* and *Training Package Development and Endorsement Process Policy*.

### Companion Volume Implementation Guide

IBSA Manufacturing, the SSO for the Process Manufacturing, Recreational Vehicle and Laboratory IRC, confirms that the PMA Companion Volume Implementation Guide, Release 2.0 is available and has been quality-assured.

## Statement of evidence against the Training Package Quality Principles

Training Package Quality Principles	Evidenced by:
1. Reflect identified workforce outcomes	<p>Changes made demonstrate a clear link back to relevant AISC decisions in commissioning the work; the IRC Skills Forecast and Proposed Schedule of Work; the National Review Schedule; and the Case for Change (please see <b>Appendix A</b>):</p> <ul style="list-style-type: none"> <li>• Qualification updated to include the new components, which align with industry outcomes</li> <li>• Open and inclusive consultation and validation commensurate with scope and impact has been conducted, as described in this Case for Endorsement</li> <li>• Training package components are compliant with <i>Standards for Training Packages 2012</i>, <i>Training Package Products Policy</i> and <i>Training Package Development and Endorsement Process Policy</i>, as evidenced by the Quality Assurance report included as <b>Appendix H</b>.</li> </ul>
2. Support portability of skills and competencies including reflecting licensing and regulatory requirements	<ul style="list-style-type: none"> <li>• Packaging rules, qualifications framework, and pathways support movement within and across sectors, as described in the PMA Companion Volume Implementation Guide, Release 2.0</li> <li>• No licensing or certification requirements exist at the time of publication.</li> </ul>
3. Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry	<ul style="list-style-type: none"> <li>• Job-specific skills required for the job role specified through named specialisations in the qualification</li> <li>• Active and extensive engagement across industry has sought to achieve a national consensus about the advice being provided to the AISC, as described in this Case for Endorsement.</li> </ul>
4. Be flexible to meet the diversity of individual and employer needs, including the capacity to adapt to changing job roles and workplaces	<ul style="list-style-type: none"> <li>• Qualification is able to be applied in different contexts – LNG, CSG, refining and chemicals</li> <li>• Multiple entry and exit points provided, as described in the PMA Companion Volume Implementation Guide, Release 2.0.</li> </ul>
5. Facilitate recognition of an individual's skills and knowledge and support movement between the school, vocational education and higher education sectors	<ul style="list-style-type: none"> <li>• Pathways provided from entry and preparatory level as appropriate to facilitate movement between schools and VET, from entry level into work, and between VET and higher education qualifications, as described in the PMA Companion Volume Implementation Guide, Release 2.0.</li> </ul>
6. Support interpretation by training providers and others through the use of simple, concise language and clear	<ul style="list-style-type: none"> <li>• Industry advice about delivery provided via the PMA Companion Volume Implementation Guide, Release 2.0</li> <li>• Units of competency and their associated assessment requirements are clear, ensuring consistent application</li> </ul>

Training Package Quality Principles	Evidenced by:
articulation of assessment requirements	<ul style="list-style-type: none"> <li>• Components are compliant with the National Register of VET requirements for publication</li> <li>• Implementation advice provided in the PMA Companion Volume Implementation Guide, Release 2.0.</li> </ul>

## G. Implementation of the COAG Industry Skills Council reforms to training packages

The decision being sought from the AISC will support the COAG Industry and Skills Council (CISC) reforms to training packages. Completion of the training package development work outlined in the Case for Change, together with extensive consultation, confirms that this work supports those reforms in the following ways:

### Removal of obsolete or superfluous content

- Elective units that did not support the job role were removed from the Certificate III in Process Plant Operations to better reflect industry intent.

### Inclusion of advice about industry's expectations of training delivery

- The PMA Companion Volume Implementation Guide, Release 2.0 provides advice on duration of training, delivery modes and pathways, work-based learning strategies, assessment and learner characteristics.

### Support for individuals to move easily from one related occupation to another

- The PMA Chemical, Hydrocarbons and Refining Training Package supports the movement of individuals between related occupations through the use of common core units and the seven specialisations.

### Creation of units that can be owned and used by multiple industry sectors

- The PMA Chemical, Hydrocarbons and Refining Training Package imports a range of units that are used across multiple sectors, and while not reviewed as part of this project, those units continue to be a feature of the qualification.

## H. A copy of the full content of the proposed training package components

The AISC will be provided with a copy of the developed training package components to be approved under this Case for Endorsement.

## Appendices

### Appendix A: Comparison of Case for Change and components submitted for endorsement

Case for Change	Stage 1 (approved)	Stage 2 (this endorsement submission)
4 qualifications: <ul style="list-style-type: none"> <li>• PMA30116 Certificate III in Process Plant Operations</li> <li>• PMA40116 Certificate IV in Process Plant Technology</li> <li>• PMA50116 Diploma of Process Plant Technology</li> <li>• PMA60116 Advanced Diploma of Process Plant Technology</li> </ul>	1 updated qualification to reflect updated unit codes and titles and include 5 new PMA units in the electives: <ul style="list-style-type: none"> <li>• PMA30116 Certificate III in Process Plant Operations</li> </ul>	Restructure of 1 qualification to align with the LNG Framework, including development of specialisations and removal of excessive, repetitive and obsolete electives: <ul style="list-style-type: none"> <li>• PMA30120 Certificate III in Process Plant Operations</li> </ul>
1 new skill set	Removed from project	Removed from project
81 existing units and up to 5 new units	27 existing units revised.  5 new units: <ul style="list-style-type: none"> <li>• PMAOPS344 Operate and troubleshoot flare system</li> <li>• PMAOPS345 Operate and troubleshoot gas treatment process</li> <li>• PMAOPS346 Operate and troubleshoot liquefaction process</li> <li>• PMAOPS347 Create and conduct isolations in the workplace</li> <li>• PMAOPS348 Operate safety, protection and shutdown systems</li> </ul>	15 new units developed for improved alignment of current and future job roles at Certificate III level.



## Appendix B: List of draft components for endorsement

### ***Units for endorsement (with prerequisites)***

Unit code	Unit title	Prerequisites
PMAOPS349	Operate and troubleshoot hydraulic systems	
PMAOPS351	Operate and troubleshoot turret swivel systems	
PMAOPS352	Operate and troubleshoot instrument and plant air systems	
PMAOPS353	Operate and troubleshoot heating, ventilation and air conditioning systems	
PMAOPS354	Operate and troubleshoot inert gas generation systems	
PMAOPS355	Operate and troubleshoot fuel systems	
PMAOPS356	Operate and troubleshoot water treatment systems	
PMAOPS357	Operate and troubleshoot produced water and water injection systems	
PMAOPS358	Process design fundamentals	
PMAOPS359	Operate and troubleshoot process measurement and control systems	
PMAOPS363	Operate and troubleshoot export systems	
PMAOPS367	Operate and troubleshoot cooling water systems	
PMAOPS368	Operate and troubleshoot heating medium/hot oil systems	
PMAOPS369	Operate and troubleshoot drain and vent systems	
PMAOPS370	Operate and troubleshoot condensate stabilisation systems	

### ***Qualification for endorsement***

Qualification code	Qualification title	Entry Requirements
PMA30120	Certificate III in Process Plant Operations	



ABN 74 109 600 302  
t +61 3 9815 7000  
f +61 3 9815 7001  
e [reception@ibsa.org.au](mailto:reception@ibsa.org.au)  
w [www.ibsa.org.au](http://www.ibsa.org.au)

Level 11 176 Wellington Pde East Melbourne Victoria AUSTRALIA 3002

15 June 2020

Dear Australian Industry and Skills Committee,

As the Chair of the Process Manufacturing, Recreational Vehicles and Laboratory IRC (IRC), I write on behalf of the IRC to support the endorsement of the PMA Chemical, Hydrocarbons and Refining Training Package (Stage 2), Release 2.0, as completed under the Activity Order Activity Order 2016- 2017/007.

The new training package components closely reflect current industry practice.

A fully constituted IRC approved the draft components for submission to the Australian Industry and Skills Committee for endorsement.

Regards

Keith Monaghan  
Chair, Process Manufacturing, Recreational Vehicle and Laboratory IRC

#### Appendix D: Technical Advisory Committee members

Name	Organisation
Stuart Whynd	Chevron
Bill Govan	Chevron
Roger Decurtins	ConocoPhillips
Milan Kutija	ConocoPhillips
Gordon McIntosh	INPEX
Ray Perrin	Origin Energy
Nigel Haywood	Resources Industry Training Council
Ian Ritchie	Santos
Brett Woods	Santos
Lawrence Ryper	Shell
Noel Otter	Shell
Michael Slavin	South Metropolitan TAFE (ACEPT)
Dean Edwards	Woodside
Joshua Smith	Woodside

## Appendix E: AQF mapping

### PMA30120 Certificate III in Process Plant Operations

Qualification code and title	Qualification descriptor	AQF qualification type descriptor	Evidence that the qualification proposed meets the AQF qualification type descriptor
<b>PMA30120 Certificate III in Process Plant Operations</b>	This qualification reflects the role of advanced operators and operations technicians who use production equipment to directly produce product, typically in the oil and gas industry. At this level, operators/technicians undertake more advanced operations, typically of integrated plant units in accordance with the operating procedures and apply their knowledge to anticipate problems. They are expected to solve a range of foreseen and unforeseen problems, using product and process knowledge to develop solutions to problems that do not have a known solution or a solution recorded in the procedures.	<b>Purpose</b> <p>The Certificate III qualifies individuals who apply a broad range of knowledge and skills in varied contexts to undertake skilled work, and provides a pathway for further learning.</p>	<p>This qualification offers technical training for plant operators/operations technicians who use production equipment to directly produce product. It prepares graduates for a range of operator roles across several industries including:</p> <ul style="list-style-type: none"> <li>• onshore and offshore LNG</li> <li>• CSG</li> <li>• chemical processing such as polyethylene</li> <li>• mineral processing such as bauxite</li> <li>• oil refining.</li> </ul> <p>Industry confirmed the difference between job requirements across AQF levels and how this should be reflected in the units of competency. It was agreed the key differences were:</p> <ul style="list-style-type: none"> <li>• Certificate II – introduction to the job, basic knowledge, could perform limited tasks under normal operating conditions, always under supervision.</li> <li>• Certificate III – had in-depth knowledge, autonomous operator able to identify and respond to abnormal situations.</li> </ul>

Qualification code and title	Qualification descriptor	AQF qualification type descriptor	Evidence that the qualification proposed meets the AQF qualification type descriptor
			<ul style="list-style-type: none"> <li>• Certificate IV – able to optimise operations.</li> </ul> <p>Core units provide basic understanding of the following key areas:</p> <ul style="list-style-type: none"> <li>• Communication</li> <li>• Work health and safety</li> <li>• Emergency response</li> <li>• Sustainable practices.</li> </ul> <p>Technical skills are acquired through elective choices. A reduced number of electives (compared to PMA30116) improves alignment to job roles but also provides the flexibility to be functional for all users (through revised packaging rules and the addition of specialisations).</p> <p>This qualification provides a pathway to PMA40116 Certificate IV in Process Plant Technology, which typically aligns to the job role of a central control-room operator.</p>
		<b>Knowledge</b> Graduates of a Certificate III will have factual, technical, procedural and theoretical knowledge in an area of work and learning.	Graduates of this qualification use existing knowledge to deal with predictable problems with known solutions, also using this knowledge to develop solutions to abnormal situations that are outside the normal operating parameters.

Qualification code and title	Qualification descriptor	AQF qualification type descriptor	Evidence that the qualification proposed meets the AQF qualification type descriptor
			<p>Technical units include more specialised knowledge of techniques and procedures for using equipment including:</p> <ul style="list-style-type: none"> <li>• understanding function and operating principles of equipment</li> <li>• operating parameters and integrity limits, and product specifications and tolerances</li> <li>• planning own work requirements from job shift needs</li> <li>• distinguishing between causes of faults, hazards and troubleshooting techniques</li> <li>• safety and emergency procedures.</li> </ul> <p>Other elective units represent components of the broader role; e.g. an understanding of the permit system and the limitations of each permit, and making decisions regarding the need for and correct use of each permit.</p>
		<p><b>Skills</b></p> <p>Graduates of a Certificate III will have:</p> <ul style="list-style-type: none"> <li>• cognitive, technical and communication skills to interpret and act on available information</li> </ul>	<p>Operators apply well-developed technical skills to operate a system of integrated plant units in accordance with the operating procedures. They typically follow set procedures to operate a complex plant, but also proactively monitor deviations from normal operating parameters. They will monitor, operate and take a lead for startups and shutdowns of plant and equipment</p>



Qualification code and title	Qualification descriptor	AQF qualification type descriptor	Evidence that the qualification proposed meets the AQF qualification type descriptor
		<ul style="list-style-type: none"> <li>cognitive and communication skills to apply and communicate known solutions to a variety of predictable problems and to deal with unforeseen contingencies using known solutions</li> <li>technical and communication skills to provide technical information to a variety of specialist and non-specialist audiences</li> <li>technical skills to undertake routine and some non-routine tasks in a range of skilled operations.</li> </ul>	<p>as well as make visual, aural and virtual inspections of plant, equipment and processes to identify and isolate faults.</p> <p>Operators at this level use communication skills to transmit technical advice and solutions; report outcomes and safety concerns; and are required to work effectively within a team.</p>
		<p><b>Application of knowledge and skills</b></p> <p>Graduates of a Certificate III will demonstrate the application of knowledge and skills:</p> <ul style="list-style-type: none"> <li>with discretion and judgement in the selection of equipment, services or contingency measures</li> </ul>	<p>Operators in the chemical, hydrocarbons and refining sectors are required to demonstrate an understanding of the process and the equipment operation in a plant with local control, or in liaison with the control-room operator in a plant with a centralised control panel.</p> <p>Technical units for the Certificate III require competence in the operation and troubleshooting of a plant unit process system</p>

Qualification code and title	Qualification descriptor	AQF qualification type descriptor	Evidence that the qualification proposed meets the AQF qualification type descriptor
		<ul style="list-style-type: none"> <li>to adapt and transfer skills and knowledge within known routines, methods, procedures and time constraints.</li> <li>in the context of taking responsibility for own outputs in work and learning, including participation in teams and taking limited responsibility for the output of others within established parameters.</li> </ul>	<p>that includes the operation of more than one plant item/unit, which together make up the unit as a whole.</p> <p>Operators at this level are part of startup and shutdown activities, and apply well-developed technical skills and basic scientific knowledge to solve a range of foreseen and unforeseen problems. They are able to exercise judgement and take responsibility in areas such as:</p> <ul style="list-style-type: none"> <li>completing observations and logs</li> <li>monitoring trends for key process variables</li> <li>preparing the plant to be taken out of /brought back into service</li> <li>undertaking other activities according to procedure as requested.</li> </ul> <p>They are also required to identify, monitor and participate in strategies to improve production efficiencies.</p>
		<p><b>Volume of Learning</b></p> <p>The volume of learning of a Certificate III is typically 1–2 years.</p>	<p>Broad consultation with industry representatives confirms that the volume of learning required to achieve this qualification falls within the AQF nominated parameters.</p>

## Appendix F: Other participating stakeholders

Key industry organisations that were contacted as part of the project:

Albemarle
Alcoa
BHP
BP
Central Petroleum
Coogee Chemicals
CSBP
Exxon Mobil
Glencore
Huntsman
Iluka Resources
Qenos
Rio Tinto
Shell QGC
South32
Stolthaven

## Appendix G: State and territory stakeholders consulted

ORGANISATION	NAME	STATE
<b>State and Territory Training Authorities (STAs)</b>		
Australian Capital Territory Government	Patrick Goodarzi	ACT
Australian Capital Territory Government	Tim Sealy	ACT
New South Wales Government	Susan Bearfield	NSW
Northern Territory Government	Dianne Campbell	NT
Northern Territory Government	Dianne Fong	NT
Queensland Government	Christopher Buchanski	Qld
Queensland Government	Tim Maloney	Qld
South Australia Government	Juliana Fitzpatrick	SA
Tasmania Government	Michael McGee	Tas.
Tasmania Government	Linda Seaborn	Tas.
Victoria Government	Tony Woolrich	Vic.
Victoria Government	Jacqueline Spencer	Vic.
Western Australia Government	Frances Parnell	WA
<b>Industry Training Advisory Bodies (ITAB)</b>		
Manufacturing Skills Australia (MSA)	Leon Drury	NSW
Industry Skills Advisory Council Northern Territory (ISAC NT)	Debbie Paylor	NT
Australian Industry Group (Ai Group)	Wayne Lee	Qld
Resources Industry Training Council	Nigel Haywood	WA
<b>Curriculum Maintenance Managers</b>		
Chisholm Institute	Paul Saunders	Vic.
<b>Other related stakeholders</b>		
Victorian Skills Commissioner	Cameron Baker	Vic.
Victorian Manufacturing Industry Advisory Group	Paul Kennett	Vic.

## Appendix H: Credit arrangements

Note: The following represents existing credit arrangements for those qualifications referenced in this Case for Endorsement.

Credit Arrangements for PMA Chemical, Hydrocarbons and Refining Training Package, Release 2.0		
Qualification Code	Qualification Title	Credit Arrangement Details
PMA30120	Certificate III in Process Plant Operations	At the time of endorsement of this training package, no national credit arrangements exist.
Links	PMA Companion Volume Implementation Guides are available at: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=9fc2cf53-e570-4e9f-ad6a-b228ffdb6875</a>	

# Quality Report for PMA Chemical, Hydrocarbons and Refining, Release 2.0 (Stage 2)

## Section 1 – Cover page

Information required	Detail
Training Package title and code	PMA Chemical, Hydrocarbons and Refining Training Package, Release 2.0
Number of new qualifications and their titles <sup>1</sup>	No new qualifications
Number of revised qualifications and their titles	One (1) revised qualification: <ul style="list-style-type: none"> <li>• PMA30120 Certificate III in Process Plant Operations</li> </ul>
Number of new units of competency and their titles	Fifteen (15) new units of competency: <ul style="list-style-type: none"> <li>• PMAOPS349 Operate and troubleshoot hydraulic systems</li> <li>• PMAOPS351 Operate and troubleshoot turret swivel systems</li> <li>• PMAOPS352 Operate and troubleshoot instrument and plant air systems</li> <li>• PMAOPS353 Operate and troubleshoot heating, ventilation and air conditioning systems</li> <li>• PMAOPS354 Operate and troubleshoot inert gas generation systems</li> <li>• PMAOPS355 Operate and troubleshoot fuel systems</li> <li>• PMAOPS356 Operate and troubleshoot water treatment systems</li> <li>• PMAOPS357 Operate and troubleshoot produced water and water injection systems</li> <li>• PMAOPS358 Process design fundamentals</li> <li>• PMAOPS359 Process measurement and control</li> <li>• PMAOPS363 Operate and troubleshoot export systems</li> <li>• PMAOPS367 Operate and troubleshoot cooling water systems</li> <li>• PMAOPS368 Operate and troubleshoot heating medium/hot oil systems</li> <li>• PMAOPS369 Operate and troubleshoot drain and vent systems</li> <li>• PMAOPS370 Operate and troubleshoot condensate stabilisation systems</li> </ul>
Number of revised units of competency and their titles	No revised units

<sup>1</sup> When the number of training products is high the titles can be presented as an attached list.



Information required	Detail
<p>Confirmation that the panel member is independent of:</p> <ul style="list-style-type: none"> <li>the Training Package or Training Package components review ('Yes' or 'No')</li> <li>development and/or validation activities associated with the Case for Endorsement ('Yes' or 'No')</li> <li>undertaking the Equity and/or Editorial Reports for the training package products that are the subject of this quality report ('Yes' or 'No')</li> </ul>	<p>Jenni Oldfield is an independent Quality Assurance Panel member:</p> <ul style="list-style-type: none"> <li>Yes, independent of this Training Package review</li> <li>Yes, independent of development and validation activities associated with the Case for Endorsement</li> <li>Yes, independent of the Equity and Editorial Reports for this Quality Report</li> </ul>
Confirmation of the Training Packages or components thereof being compliant with the <i>Standards for Training Packages 2012</i>	The components reviewed meet the requirements of the <i>Standards for Training Packages 2012</i> .
Confirmation of the Training Packages or components thereof being compliant with the <i>Training Package Products Policy</i>	The components reviewed meet the requirements set out in the <i>Training Package Products Policy</i> .
Confirmation of the Training Packages or components thereof being compliant with the <i>Training Package Development and Endorsement Process Policy</i>	The draft components reviewed meet the requirements set out in the <i>Training Package Development and Endorsement Process Policy</i> .
<p>Panel member's view about whether:</p> <ul style="list-style-type: none"> <li>the evidence of consultation and validation process being fit for purpose and commensurate with the scope</li> <li>estimated impact of the proposed changes is sufficient and convincing</li> </ul>	The evidence of consultation and validation on this project has been fit for purpose and commensurate with the scope of the project, and the estimated impact of the proposed changes is sufficient and convincing.
Name of panel member completing Quality Report	Jenni Oldfield, JOConsultancy Quality Assurance Panel member
Date of completion of the Quality Report	12 June, 2020

## Section 2 – Compliance with the Standards for Training Packages 2012

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 1</p> <p>Training Packages consist of the following:</p> <ol style="list-style-type: none"> <li>1. AISC endorsed components: <ul style="list-style-type: none"> <li>• qualifications</li> <li>• units of competency</li> <li>• assessment requirements (associated with each unit of competency)</li> <li>• credit arrangements</li> </ul> </li> <li>2. One or more quality assured companion volumes</li> </ol>	<b>Yes</b>	<p>The components of the <i>PMA Chemical, Hydrocarbons and Refining Training Package, Release 2.0 (Stage 2)</i> submitted for quality review meet the requirements of Standard 1.</p> <p>Components include:</p> <ul style="list-style-type: none"> <li>• 15 new units of competency with associated assessment requirements</li> <li>• One revised qualification: <ul style="list-style-type: none"> <li>○ PMA30120 Certificate III in Process Plant Operations</li> </ul> </li> <li>• credit arrangements (included in the Case for Endorsement).</li> </ul> <p>The submission includes the <i>PMA Manufacturing Training Package Implementation Guide Release 2.0</i>, which has been quality assured.</p>
<p>Standard 2</p> <p>Training Package developers comply with the <i>Training Package Products Policy</i></p>	<b>Yes</b>	<p>IBSA Manufacturing has complied with the <i>Training Package Products Policy</i>.</p> <p>All components are appropriately coded with new, unique codes. Access and equity issues are addressed in the <i>PMA Companion Volume Implementation Guide, Release 2.0</i>. Foundation Skills have been highlighted in the appropriate field in all the units submitted, following advice from industry. Supporting information about Foundation Skills is included in the Implementation Guide, expressed using reference to the Australian Core Skills Framework (ACSF) and Employability Skills.</p> <p>All units have been listed and appropriately mapped in the <i>PMA Manufacturing Training Package Implementation Guide Release 2.0</i>.</p>

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 3</p> <p>Training Package developers comply with the AISC <i>Training Package Development and Endorsement Process Policy</i></p>	<b>Yes</b>	<p>IBSA Manufacturing has complied with the AISC <i>Training Package Development and Endorsement Process Policy</i>.</p> <p>The <i>Case for Endorsement</i> outlines the training package development process, ensuring thorough national industry consultation and stakeholder engagement throughout, using a variety of methods:</p> <ul style="list-style-type: none"> <li>• IRC monitoring</li> <li>• specialist technical advice from a large Training Advisory Committee (TAC)</li> <li>• two rounds of public consultation covering four weeks (shorter period than normal requested and approved by industry), where key industry organisations, State/Territory Training Authorities and Industry Training Advisory Bodies were notified and provided feedback</li> <li>• establishment of a project webpage outlining project activities and including a subscriber alert option.</li> </ul> <p>Editorial and Equity Reports have been completed by an IBSA inhouse editor.</p>
<p>Standard 4</p> <p>Units of competency specify the standards of performance required in the workplace</p>	<b>Yes</b>	All 15 units of competency specify the standards of performance required for operators who work in liquified natural gas (LNG) environments.
<p>Standard 5</p> <p>The structure of units of competency complies with the unit of competency template</p>	<b>Yes</b>	All 15 units of competency comply with the unit template.
<p>Standard 6</p> <p>Assessment requirements specify the evidence and required conditions for assessment</p>	<b>Yes</b>	The assessment requirements of all 15 units clearly specify the volume and frequency of tasks that must be performed for assessment, relevant knowledge evidence and clear conditions for assessment. The statements around frequency of tasks to be performed are brief and similar across units, but well supported by industry representatives.

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 7</p> <p>Every unit of competency has associated assessment requirements. The structure of assessment requirements complies with the assessment requirements template</p>	Yes	Every unit has associated assessment requirements, the structure of which complies with the template included in the <i>Standards for Training Packages 2012</i> . This has been confirmed by the Editorial review.
<p>Standard 8</p> <p>Qualifications comply with the Australian Qualifications Framework specification for that qualification type</p>	Yes	The PMA30120 Certificate III in Process Plant Operations includes several units coded lower than the targeted AQF3 level, which is not ideal, but the Case for Endorsement includes a qualification mapping that justifies an alignment to AQF3, which is supported by industry.
<p>Standard 9</p> <p>The structure of the information for the Australian Qualifications Framework qualification complies with the qualification template</p>	Yes	<p>The structure of the information included in the qualification, complies with the template included in the <i>Standards for Training Packages 2012</i>.</p> <p>Note the qualification does include one elective unit with a conditional prerequisite, but that unit was not included in either stage of the current review project. The <i>Case for Endorsement</i> notes that industry advise the elective unit remains relevant for the job role.</p>
<p>Standard 10</p> <p>Credit arrangements existing between Training Package qualifications and Higher Education qualifications are listed in a format that complies with the credit arrangements template</p>	Yes	Credit arrangements for the PMA30120 Certificate III in Process Plant Operation have been included in a format that complies with the appropriate template, included as an appendix in the <i>Case for Endorsement</i> .
<p>Standard 11</p> <p>A quality assured companion volume implementation guide produced by the Training Package developer is available at the time of endorsement and complies with the companion volume implementation guide template.</p>	Yes	The <i>PMA Companion Volume Implementation Guide, Release 2.0</i> , includes information about all components included in this review, which have been added to the <i>PMA Chemical, Hydrocarbons and Refining Training Package, Release 2.0</i> . The Implementation Guide is a general guide for the whole <i>PMA Manufacturing Training Package</i> covering several industry sectors, but the changes between Release 1.0 and 2.0 of the training package, and the addition of the revised qualification, 15 new units, and the units developed and revised through the first stage of this project, is clear. The Implementation Guide will be available at endorsement for publication on the VETNet site.

Standards for Training Packages	Standard met 'yes' or 'no'	Evidence supporting the statement of compliance or noncompliance (including evidence from equity and editorial reports)
<p>Standard 12</p> <p>Training Package developers produce other quality assured companion volumes to meet the needs of their stakeholders as required.</p>	<b>NA</b>	This review has not included the review of any other companion volumes.

## Section 3 – Compliance with the training package quality principles

Note: not all training package quality principles might be applicable to every training package or its components. Please provide a supporting statement/evidence of compliance or non-compliance against each principle.

### Quality principle 1. Reflect identified workforce outcomes

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance/non compliance with the quality principle  Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Driven by industry's needs	Yes	<p>The <i>Case for Endorsement</i> includes detail of <i>Activity Order IBSA/TPD/2016-2017/007</i>, initially due to be completed by June 2018. The Activity Order was varied in September 2018 to allow the project to align with an industry project to analyse job roles (and training) in the LNG industry. In June 2019 the project was formally split into two parts:</p> <ul style="list-style-type: none"> <li>the first part being the review and update of 27 existing units or competency and the development of 5 new units (components endorsed);</li> <li>the second part is this current project to revise the Certificate III in Process Plant Operations and develop up to 17 new units (this report covers this part of the project).</li> </ul>
<p>Compliant and responds to government policy initiatives</p> <p>Training package component responds to the COAG Industry and Skills Council's (CISC) training package-related initiatives or directions, in particular the 2015 training package reforms. Please specify which of the following CISC reforms are relevant to the training product and identify supporting evidence:</p> <ul style="list-style-type: none"> <li>ensure obsolete and superfluous qualifications are removed from the system</li> <li>ensure that more information about</li> </ul>	Yes	<p>The <i>Case for Endorsement</i> provides evidence that the <i>PMA Chemical, Hydrocarbons and Refining Training Package, Release 2.0</i> components submitted for endorsement are compliant with both the <i>Training Package Products Policy</i> and the <i>Training Package Development and Endorsement Process Policy</i>, and that the new components have been:</p> <ul style="list-style-type: none"> <li>driven by industry needs</li> <li>supported by the nature and scope of stakeholder consultation</li> <li>supported by stakeholders as reflecting contemporary work organisation and job profiles.</li> </ul> <p>This quality assurance review determines that the components are compliant with the <i>Standards for Training Packages 2012</i>.</p> <p>Evidence that the training package work has responded to CISC's policy initiatives, in particular the 2015 training package reforms, includes:</p> <ul style="list-style-type: none"> <li>removing obsolete or superfluous content from 27 units (stage 1)</li> </ul>



<p>industry's expectations of training delivery is available to training providers to improve their delivery and to consumers to enable more informed course choices</p> <ul style="list-style-type: none"> <li>• ensure that the training system better supports individuals to move easily from one related occupation to another</li> <li>• improve the efficiency of the training system by creating units that can be owned and used by multiple industry sectors</li> <li>• foster greater recognition of skill sets</li> </ul>		<ul style="list-style-type: none"> <li>• the inclusion of industry's expectations of training delivery in the <i>PMA Companion Volume Implementation Guide Release 2.0</i></li> <li>• support for individuals to move between related occupations through the use of common core units and several imported units</li> <li>• creation of units that can be used across several sectors in the PMA Training Package, even though units have been developed within an LNG-focussed project.</li> </ul>
<p>Reflect contemporary work organisation and job profiles incorporating a future orientation</p>	<p>Yes</p>	<p>The <i>Case for Endorsement</i> provides details of an open and inclusive consultation and validation process, commensurate with the scope and impact of the project, including:</p> <ul style="list-style-type: none"> <li>• IRC monitoring</li> <li>• specialist technical advice from a large TAC representing the broad range of users including LNG, coal seam gas (CSG), who all met on three occasions (before COVID-19 restrictions) and then confirmed development via email</li> <li>• two rounds of public consultation, where key industry organisations, State/Territory Training Authorities and Industry Training Advisory Bodies were notified (more than 900 alerts sent to stakeholders)</li> <li>• establishment of a project webpage outlining project activities and including a subscriber alert option (with more than 250 webpage views across stage 2 of the project).</li> </ul>

## Quality principle 2: Support portability of skills and competencies including reflecting licensing and regulatory requirements

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle  Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support movement of skills within and across organisations and sectors	Yes	The <i>PMA Companion Volume Implementation Guide, Release 2.0</i> , provides information about pathways between PMA qualifications.
Promote national and international portability	Yes	The <i>Case for Endorsement</i> includes details of thorough consultations that revealed that industry had commissioned a job role analysis of Certificate III and IV level workers in the LNG sector, with the intention of developing a framework to ensure that future training would meet industry needs. The LNG Framework shows the alignment of existing and new units of competency with future job roles, and industry has specified that training package components should align.  The alignment of PMA Training Package work to the LNG Framework is an excellent example of industry leading vocational education and training.
Reflect regulatory requirements and licensing	Yes	Units included in this submission include the following statement: <ul style="list-style-type: none"> <li>No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.</li> </ul>

**Quality principle 3: Reflect national agreement about the core transferable skills and core job-specific skills required for job roles as identified by industry**

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle  Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Reflect national consensus	Yes	<p>The <i>Case for Endorsement</i> outlines the national consultation and validation process and the organisations and participants involved.</p> <p>The TAC included industry stakeholders and RTOs that use the <i>PMA Chemicals, Hydrocarbons and Refining Training Package</i>.</p> <p>The number of organisations that participated and the number of stakeholders alerted for project updates demonstrates that IBSA Manufacturing sought, and achieved, a national consensus on the components submitted for endorsement.</p> <p>There are no reports by exception.</p> <p>A letter of support from the IRC is included with the submission.</p>
Recognise convergence and connectivity of skills	Yes	<p>Even though this project has focussed on LNG work, the qualification has been structured to apply to other sectors within the Chemical, Hydrocarbons and Refining Industry. PMA30120 Certificate III in Process Plant Operations has a common core and allows for optional specialisation in seven different contexts.</p> <p>The qualification includes a bank of electives that includes cross-sector and imported units, and the packaging rules allow for two units to be imported from any other training package or accredited course that are relevant to the job role.</p>

**Quality principle 4: Be flexible to meet the diversity of individual and employer needs including the capacity to adapt to changing job roles and workplaces**

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle  Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Meet the diversity of individual and employer needs	Yes	<p>The revised <i>PMA30120 Certificate III in Process Plant Operations</i> includes optional specialisations to meet varying needs of industry work in different contexts, including:</p> <ul style="list-style-type: none"> <li>• Offshore Oil Upstream</li> <li>• Gas/LNG Upstream</li> <li>• Gas/LNG Downstream</li> <li>• Utilities</li> <li>• CSG Plant</li> <li>• CSG Well</li> <li>• CSG Pipelines.</li> </ul> <p>The elective bank includes a long list of units that cover cross-sector job tasks. Electives also include imported units to cover a diverse range of individual and employer needs.</p>
Support equitable access and progression of learners	Yes	<p>Multiple entry and exit points to PMA qualifications are described in the <i>PMA Companion Volume Implementation Guide, Release 2.0</i>. No qualifications have entry requirements and credit can be given for units completed in lower level qualifications.</p> <p>No new units include pre-requisite units.</p>

**Quality principle 5: Facilitate recognition of an individual's skills and knowledge and support movement between the school, vocational education and higher education sectors**

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle  Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support learner transition between education sectors	Yes	Detailed information on career pathways is included in the <i>PMA Companion Volume Implementation Guide Release 2.0</i> . Because of the nature of the work and the highly sophisticated plant required for 'operation', no PMA qualifications are appropriate for VET in Schools delivery. The <i>PMA Companion Volume Implementation Guide Release 2.0</i> also notes that higher level PMA qualifications can lead onto higher education programs.

**Quality principle 6: Support interpretation by training providers and others through the use of simple, concise language and clear articulation of assessment requirements**

Key features	Quality principle is met: Yes / No or N/A	Evidence demonstrating compliance with the quality principle  Please see examples of evidence in the <i>Training Package Development and Endorsement Process Policy</i>
Support implementation across a range of settings	Yes	Industry advice about delivery is provided in the <i>PMA Companion Volume Implementation Guide Release 2.0</i> , including information about health and safety, how to deal with access and equity issues, and advice about foundation skills.
Support sound assessment practice	Yes	The units of competency and their associated assessment requirements are clearly written, and the Editorial Report confirms this. There have also been several checks of units throughout the project to ensure that the units and the qualification match the templates set out in the <i>2012 Standards for Training Packages</i> .
Support implementation	Yes	All components within this submission comply with the requirements of the National Register and will be ready for publication on TGA at endorsement, including the <i>PMA Companion Volume Implementation Guide, Release 2.0</i> .