

## **FIELD                    MANUFACTURING**

### **Review of *Energy and Chemical Plant* and *Petrochemical Industry* qualifications**

**National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands in Steam Generation, Ancillary Operations, Geothermal, Waste Treatment, and Co-generation [Ref: 0140]**

**National Certificate in Energy and Chemical Plant (Process Operation) (Level 4) with optional strands in Refrigeration, Steam Generation, Ancillary Operations, Geothermal, Waste Treatment, and Co-generation [Ref: 0141]**

**National Certificate in Energy and Chemical Plant (Process Operation – Boiler Attendant) (Level 2) [Ref: 0775]**

**National Certificate in Petrochemical Industry (Core) (Level 2) [Ref: 0977]**

**National Certificate in Petrochemical Industry (Production) (Level 3) [Ref: 0980]**

**National Certificate in Petrochemical Industry (Production) (Level 4) with strands in Control Room Operations; Field Operations; Steam Generation; Storage, Transmission and Transfer; and Supervision and Quality [Ref: 0981]**

The NZ Extractive Industries Training Organisation has completed the review of the Energy and Chemical Plant qualifications listed above. The review was administered by the NZ Extractive Industries Training Organisation on behalf of the Steam and Hazardous Gases Sector Advisory Group comprising representatives from the Electricity Supply Industry Training Organisation, the NZ Extractive Industries Training Organisation, the Forest Industries Training and Education Council, and the New Zealand Industry Training Organisation.

The NZ Extractive Industries Training Organisation has completed the review of the Petrochemical Industry qualifications listed above. The review was administered by the NZ Extractive Industries Training Organisation on behalf of the Petrochemical Industry.

### **Replacement qualifications**

**National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands in Petrochemical Industry; Kraft Pulp and Chemical Operations; and Kraft Liquor Evaporation [Ref: 1343]**

**National Certificate in Energy and Chemical Plant (Process Operation) with optional strands in Steam Generation; Turbine Operations; Waste Treatment; Refrigeration; Chemical Continuous Process; Chemical Batch Process; Solid Handling; Petrochemical Field Operations; Petrochemical Control Room Operations; Petrochemical Production Storage; Kraft Cycle Operations; Kraft Bleach and Chemical Operations; and Kraft Pulping and Chemical Plant [Ref: 1344]**

## New qualification

National Certificate in Energy and Chemical Plant (Boiler Operation) (Level 2) [Ref: 1342]

### Date new versions published

**December 2007**

The next qualification review is planned to take place during 2011.

### Summary of review and consultation process

The Energy and Chemical Plant qualifications were reviewed by the sector advisory group members, training providers, users, companies, and assessors in conjunction with, and subsequent to, the planned review of standards in the Energy and Chemical Plant subfield, and following feedback about overlapping assessment. Because the qualifications affect a wide range of industries, and to ensure that the core competencies are achievable across all sectors the review process included consultation with the energy, chemical, pulp and paper, petrochemical production, and petrochemical refining industries, as well as the Department of Labour.

The Petrochemical Industry qualifications were reviewed by the Petrochemical sector advisory group members, training providers, users, companies, and assessors. Because of the significant overlap in content between any review of the Petrochemical qualifications and the proposed Energy and Chemical qualifications, the advisory group agreed to work with the Steam and Hazardous Gases Advisory Group to incorporate strands into the relevant Energy and Chemical qualifications and to allow the Petrochemical qualifications listed above to expire.

### Main changes resulting from the review

National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands in Steam Generation, Ancillary Operations, Geothermal, Waste Treatment, and Co-generation [Ref: 0140]

National Certificate in Petrochemical Industry (Core) (Level 2) [Ref: 0977]

*Replaced by*

**National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands in Petrochemical Industry; Kraft Pulp and Chemical Operations; and Kraft Liquor Evaporation [Ref: 1343]**

Review category	<b>C</b>	See <a href="#">Key to Qualification Review Categories</a> at the end of report
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There are differences between the new and replaced qualifications. Changes include:

- the compulsory and elective sections are common to all industries in the new qualification
- only the Petrochemical Industry and Pulp and Paper Industry have placed optional strands in the new qualification.

### Petrochemical Industry Optional Strand

- replaced the National Certificate in Petrochemical Industry (Core) (Level 2) [Ref: 0977]
- standards 1277, 3503, 5868, 9588, 9625, 9631, 16800, 17588, and 19419 were deleted
- standards 3271, 4647, and 18426 were added to the strand
- standard 497 was replaced by standard 17593
- standards 4556, 4559, 3062, and 3065 were replaced by standards 21459, 3032, 21467 and 21469 respectively
- standards 17602, 3047, and 4553 were moved to the compulsory section
- standard 3060 was moved to the elective section.

### Transition

People currently working towards either of the replaced qualifications may complete the requirements for that qualification by 31 December 2010 or transfer their results to the new qualification. The last date for entry to training programmes or courses for the replaced qualifications is December 2008. Assessments for the new qualification can start immediately.

It is anticipated that no existing trainees will be disadvantaged by these transition arrangements. Any person who feels they were disadvantaged by these transition arrangements should contact the New Zealand Extractive Industries Training Organisation at the address below. Appeals will be considered on a case by case basis.

NZ Extractive Industries Training Organisation – Steam and Hazardous Gases Advisory Group  
PO Box 2623  
CHRISTCHURCH

Telephone 03 964 4710  
Email [info@exito.org.nz](mailto:info@exito.org.nz)

This qualification contains standards that replace earlier standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see table below.

Credit for	Exempt from
3041	21456
3059	21452
3062, 3063	21467
3065	21468
3067	21469

National Certificate in Energy and Chemical Plant (Process Operation) (Level 4) with optional strands in Refrigeration, Steam Generation, Ancillary Operations, Geothermal, Waste Treatment, and Co-generation [Ref: 0141]

National Certificate in Petrochemical Industry (Production) (Level 4) with strands in Control Room Operations; Field Operations; Steam Generation; Storage, Transmission and Transfer; and Supervision and Quality [Ref: 0981]

*Replaced by*

**National Certificate in Energy and Chemical Plant (Process Operation) with optional strands in Steam Generation; Turbine Operations; Waste Treatment; Refrigeration; Chemical Continuous Process; Chemical Batch Process; Solid Handling; Petrochemical Field Operations; Petrochemical Control Room Operations; Petrochemical Production Storage; Kraft Cycle Operations; Kraft Bleach and Chemical Operations; and Kraft Pulping and Chemical Plant [Ref: 1344]**

Review category	<b>C</b>	See <a href="#">Key to Qualification Review Categories</a> at the end of report
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There are differences between the new and replaced qualifications. Changes include:

- the compulsory section is common to all industries in the new qualification
- further optional strands in Chemical Continuous Process, Chemical Batch Process, Kraft Bleach and Chemical Operations, and Kraft Pulping and Chemical Plant were added to the new qualification.

#### **Steam Generation Optional Strand**

- replaced the Steam Generation Optional Strand of the National Certificate Energy and Chemical Plant (Process Operation) (Level 4) with optional strands [Ref: 0141], and the Steam Generation Strand of the National Certificate in Petrochemical Industry (Production) (Level 4) with strands [Ref: 0981]
- standards 3051 and 21466 were added to the strand
- standard 3041 was replaced by standard 21456
- the elective section in this strand of the National Certificate in Petrochemical Industry (Production) (Level 4) with strands [Ref: 0981] was replaced by other strands on the new qualification.

#### **Petrochemical Field Operations Optional Strand**

- replaced the National Certificate in Petrochemical Industry (Production) (Level 4) with the Field Operations Strand [Ref: 0981]
- standards 3049, 3063, 3066, 8085, 9696, and 11101 were deleted
- standards 9518, 9603, and 9624 were moved to the strand elective section
- standard 3032 was moved to the National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands [Ref: 1343]
- standards 3033, 3039, 3043 and 3050 were replaced by standards 21465, 21455, 21457, and 21453 respectively
- the elective section in this strand of the National Certificate in Petrochemical Industry (Production) (Level 4) with strands [Ref: 0981] was replaced by other strands in the new qualification.

### **Petrochemical Control Room Optional Strand**

- replaced the National Certificate in Petrochemical Industry (Production) (Level 4) with the Control Room Operations Strand [Ref: 0981]
- standards 3049, 3063, 3066, 8085, 9696, and 11101 were deleted
- standards 9518, 9603, 9617, and 9624 were moved to the strand elective section
- standard 3032 was moved to the National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands [Ref: 1343]
- standards 3033, 3039, 3043, and 3050 were replaced by standards 21465, 21455, 21457, and 21453 respectively
- the elective section in this strand of the National Certificate in Petrochemical Industry (Production) (Level 4) with strands [Ref: 0981] was replaced by other strands in the new qualification.

### **Petrochemical Production Storage Optional Strand**

- replaced the National Certificate in Petrochemical Industry (Production) (Level 4) with the Storage, Transmission and Transfer Strand [Ref: 0981]
- standards 3049, 3063, 3066, 8085, 9696, and 11101 were deleted
- standards 9518, 9603, 9617, and 9624 were moved to the strand elective section
- standard 3032 was moved to the National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands [Ref: 1343]
- standards 3033, 3039, 3043, and 3050 were replaced by standards 21465, 21455, 21457 and 21453 respectively
- the elective section in this strand of the National Certificate in Petrochemical Industry (Production) (Level 4) with strands [Ref: 0981] was replaced by other strands in the new qualification.

### **Transition**

People currently working towards either of the replaced qualifications may complete the requirements for that qualification by 31 December 2010 or transfer their results to the new qualification. The last date for entry to training programmes or courses for the replaced qualifications is December 2008. Assessments for the new qualification can start immediately. The new qualification does not include an optional strand in Supervision and Quality. People working towards the National Certificate in Petrochemical Industry (Production) (Level 4) [Ref: 0981] with the Supervision and Quality Strand will need to complete the requirements for that qualification by 31 December 2010.

It is anticipated that no existing trainees will be disadvantaged by these transition arrangements. Any person who feels they have been disadvantaged by these transition arrangements should contact the New Zealand Extractive Industries Training Organisation at the address above. Appeals will be considered on a case by case basis...

This qualification contains standards that replace earlier standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see table below.

Credit for	Exempt from
3033	21465, 21466
3038	21454
3039	21455
3041	21456
3043	21457
3044, 4558	21458
3056	21453
3556, 15828	21486
4554, 4555, 16297, 16298, 16299	21463
5869	21454
9593, 9594	18725
9595	18422
15822, 15824, 16288, 16290, 16291	21494
16293, 16294	21492

### National Certificate in Petrochemical Industry (Production) (Level 3) [Ref: 0980]

Review category	<b>D</b>	See <a href="#">Key to Qualification Review Categories</a> at the end of report
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This qualification will expire and not be replaced. The last date for meeting the requirements for this qualification is December 2010. The new National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands [Ref: 1343], and the new National Certificate in Energy and Chemical Plant (Process Operation) with optional strands [Ref: 1344] will be used by the Petrochemical industry to develop the skills and knowledge required in the industry at this level.

People currently working towards the expiring qualification may complete the requirements for that qualification or transfer their results to the new National Certificate in Energy and Chemical Plant (Process Operation) (Level 2) with optional strands [Ref: 1343] or the new National Certificate in Energy and Chemical Plant (Process Operation) with optional strands [Ref: 1344]. The last date for entry to training programmes or courses for the expiring qualification is December 2007.

## National Certificate in Energy and Chemical Plant (Process Operation – Boiler Attendant) (Level 2) [Ref: 0775]

Review category	D	See <a href="#">Key to Qualification Review Categories</a> at the end of report
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This qualification will expire and not be replaced. The last date for meeting the requirements for this qualification is December 2010. The new National Certificate in Energy and Chemical Plant (Boiler Operation) (Level 2) [Ref: 1342] covers skills similar to those in the expiring qualification.

The major change was the inclusion of unit standard 21463 in the compulsory section, which recognised skills and knowledge required to operate a boiler up to 20 MW.

People currently working towards the expiring qualification may complete the requirements for that qualification or transfer their results to the new National Certificate in Energy and Chemical Plant (Boiler Operation) (Level 2) [Ref: 1342]. The last date for entry to training programmes or courses for the expiring qualification is December 2007.

It is anticipated that no existing trainees will be disadvantaged by these transition arrangements. Any person who feels they have been disadvantaged by these transition arrangements should contact the New Zealand Extractive Industries Training Organisation at the address above. Appeals will be considered on a case by case basis.

### NEW

## National Certificate in Energy and Chemical Plant (Boiler Operation) (Level 2) [Ref: 1342]

This qualification contains standards that replace earlier standards. For the purposes of this qualification, people who have gained credit for the expiring standards are exempt from the requirement to gain credit for the replacement standards – see table below.

Credit for	Exempt from
3033	21465, 21466
3059	21452
3062, 3063	21467
3065	21468
3067	21469
4554, 4555, 16297, 16298, 16299	21461, 21462, 21463
16296	21460

## Key to Qualification Review Categories

<b>Category A</b> The qualification is published as a new version with the same NQF ID	Changes are made to SSB name, contact details or purpose statement
	No change is made to title, rules or components of the qualification
	No transition arrangements are required
<b>Category B</b> The qualification is published as a new version with the same NQF ID	Changes are made to title, rules or components
	The new version of the qualification recognises a similar skill set to that recognised by the previous version
	The SSB is confident that people awarded the new or previous version are comparable in terms of competence
<b>Category C</b> A new (replacement) qualification is published with new NQF ID	Transition arrangements are required if candidates must gain additional/different credits for the new version
	Significant changes are made to the qualification in terms of components, structure, type or level
	The SSB views people with the replacement qualification as being significantly different in terms of competence from those with the replaced qualification
	Transition arrangements are required
<b>Category D</b> Qualification will expire. There is no replacement qualification	Transition may be limited to phase-out dates
	Qualification is no longer required by industry