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ACCOUNTING FOR INVENTORIES

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This Standard replaces SSAP-4: Accounting for Inventories (1986), although that Statement will continue to apply until the completion accounting periods which end prior to 30 September 1994.

This Standard should be read in the context of the Explanatory Foreword to General Purpose Financial Reporting published by the Council, Institute of Chartered Accountants of New Zealand.

The Accounting Standards Review Board (the Board) has approved FRS-4: Accounting for Inventories, for the purposes of the Financial Reporting Act 1993, to apply to reporting entities, the Crown and all departments, Offices of Parliament and Crown entities (each of which is defined in the Act) other than as expressly exempted by the terms of the Standard.

The Board has also approved this Standard to apply to local authorities (as defined in the Act) from 1 July 1998.

1 INTRODUCTION

COMMENTARY

1.1 This Standard deals with the measurement of inventories and their disclosure in a financial report.

1.2 A key issue in accounting for inventories is to determine which costs are to be recognised and carried forward as an asset at balance date until the related revenue is recognised in a later period. The inventories' costs to be recognised as an asset include all costs incurred in bringing them to the location and condition necessary for their intended use or sale. The amount of inventories' costs recognised as an asset is not to exceed net realisable value.

STANDARD

1.3 This Standard does not apply to:

(a) inventories accumulated under construction contracts (see FRS-14: *Accounting for Construction Contracts*);

(b) forest crops;

(c) farm produce and livestock held by the producer;

(d) assets available for hire; and

(e) financial instruments.

COMMENTARY

1.4 Financial reporting standards are paragraphs in bold type-face in this Standard. Where appropriate, interpretive commentary paragraphs in plain type-face follow the financial reporting standards.

2 APPLICATION

STANDARD

2.1 This Standard applies to the general purpose financial reports of all entities except where exempted by paragraph 2.2.

2.2 Entities which qualify for exemption in accordance with the *Framework for Differential Reporting* need not disclose the sub-classification of inventories required by paragraph 5.29(b)(ii) of this Standard.

2.3 The financial reporting standards set out in this Standard shall apply to all financial reports where such application is of material consequence. A statement, fact, or item is material if it is of such a nature or amount that its disclosure, or the method of treating it, given full consideration of the circumstances applying at the time the financial report is completed, is likely to influence the users of the financial report in making decisions or assessments.

2.4 This Standard applies to general purpose financial reports covering periods ending on or after 30 September 1994.

3 STATEMENT OF PURPOSE

COMMENTARY

3.1 The purpose of this Standard is to:

(a) specify the method of measuring inventories and the manner in which costs are to be assigned to inventories; and

(b) require disclosure of information relating to inventories in the financial report.

4 DEFINITIONS

STANDARD

The following terms are used in this Standard with these meanings:

4.1 "Inventories" are assets which are:

(a) held for realisation in the ordinary course of business; or

(b) in the process of production for realisation in the ordinary course of business; or

(c) to be absorbed into goods and services for realisation in the ordinary course of business.

"Inventories" includes consumable stores and supplies but does not include depreciable assets as defined in SSAP-3: *Accounting for Depreciation*.

COMMENTARY

4.2 Inventories are sometimes called "stocks" or "work in progress" or other names. Whatever the name used, this Standard applies when the asset concerned has the attributes of inventories.

4.3 The key attribute of inventories is that the costs accrued relate to items held for realisation in the ordinary course of business, or used directly or indirectly in the process of production of goods and services for such realisation. Inventories may be goods or services. The holding period does not determine whether or not items constitute inventories and whether inventory items may be current or non-current assets.

4.4 Inventories include the work in progress of an entity. For an entity that is a service provider, inventories include those partially completed services rendered but not yet recognised as service revenue.

STANDARD

4.5 "Consumable stores and supplies" are aids to manufacture or service, such as fuels and oil, which are absorbed in the production of goods and services for realisation and which do not become part of the finished product or service.

4.6 "Cost of inventories" is the total of:

(a) cost of purchase (as defined in paragraph 4.10 below);

(b) cost of conversion (as defined in paragraph 4.13 below); and

(c) other costs incurred in bringing the inventories to their present location and condition.

COMMENTARY

4.7 The cost of inventories is the costs which have been incurred in the ordinary course of business to bring the inventories to their present condition and location. The cost of inventories also includes all related production overheads, even though some of these are incurred on a time basis.

4.8 The methods selected to establish the cost of inventories are to estimate as fairly as possible the costs actually incurred to bring the inventories to their present location and condition. For example, a manufacturer might establish cost of inventories by adding the purchase cost of materials incorporated, the direct cost of labour and associated overhead and attributable indirect costs. However, in a further example, where retailers have many rapidly changing individual stock items, the most practical estimate of cost may be to measure stock on the shelves at current selling prices less the normal gross profit margin.

4.9 A service provider's cost of inventories includes primarily the labour cost and other costs of those people, including supervisors, who are directly engaged in providing the service; the cost of inventories will include overhead costs attributable to the provision of the service. Labour and other costs are not to be included where those costs relate to people engaged in obtaining sales or in general administration. Often, people engaged in providing services share premises or other services with people engaged in obtaining sales or in general administration; in these circumstances, overhead costs are to be apportioned between those overhead costs attributable to the service (which are to be included in the cost of inventories) and those attributable to sales and administration (which are to be recognised as an expense of the period when they are incurred).

STANDARD

4.10 "Cost of purchase" includes:

(a) import duties and other purchase taxes (other than those subsequently

recoverable);

(b) transport and handling costs;

(c) any other directly attributable costs of acquisition; and

(d) deductions for immediate or deferred discounts (other than settlement discounts), rebates and subsidies received.

COMMENTARY

4.11 Trade discounts are directly attributable to the cost of inventory purchased and are to be deducted in ascertaining the purchase cost of inventory. Settlement discounts, however, are related to the method and timing of payment. When attributable to financing activities, settlement discounts are not to be deducted from the cost of inventory. Interest costs on delayed settlement of the purchase price relate also to financing activities and are not to be included in inventory.

4.12 Rebates and subsidies received are similar to trade discounts and are to be deducted in establishing the cost of purchase of inventories. It is sometimes difficult to relate rebates and subsidies received to particular items of inventory especially where they are negotiated after the purchase has been settled or when they relate to total purchases for a period. Nevertheless such rebates and subsidies received reduce the cost of purchase and are to be attributed to inventories purchased in an appropriate manner.

STANDARD

4.13 "Cost of conversion" includes:

(a) the cost of labour (including any charges directly incurred in connection with such labour) and of sub-contract work; and

(b) other production costs.

COMMENTARY

4.14 Cost of conversion does not include expenditures which relate to general administration, marketing and distribution to customers. Finance costs are not to be included in the cost of inventories that are routinely manufactured on a repetitive basis over a short period of time. Where inventories require a substantial period of time to bring them to a saleable condition, attributable borrowing costs may be capitalised as part of the inventories, subject to the cost of the inventories not exceeding net realisable value as defined in paragraph 4.15.

STANDARD

4.15 "Net realisable value" is the estimated selling price in the ordinary course of business less costs of completion and less costs necessarily to be incurred in order to make the sale.

5 FINANCIAL REPORTING

Measurement of Inventories

STANDARD

5.1 Inventories shall be measured at the lower of cost and net realisable value.

COMMENTARY

5.2 Inventories are a significant portion of the assets of many entities. The measurement and presentation of inventories therefore are significant in determining and presenting the financial performance and financial position of those entities.

5.3 Inventories are to be written down to net realisable value either item by item or by groups of similar or related items; the method selected is to be applied consistently. Items are to be written down individually, for example, when service providers accumulate costs for each service where a separate selling price will be charged. Items are to be written down by groups, for example, where items of inventory relating to the same product line have similar purposes or end uses, or are produced and marketed in the same geographical area and cannot practically be evaluated separately from other items in that product line.

5.4 When items of inventory are not similar or related in terms of paragraph 5.3, it is not appropriate to offset losses (arising from some items of inventory with a net realisable value less than cost) against unrealised profits of dissimilar items which have a net realisable value that exceeds cost. Such an offset could occur if the total net realisable value of an inventory of dissimilar items or of dissimilar groups of items in terms of paragraph 5.3 is compared with the total cost of the inventory.

Production Overheads

STANDARD

5.5 Costs shall include a systematic allocation of those production overheads that relate to putting the inventories in their present location and condition. The systematic allocation of those production overheads shall be based on the capacity of the production facilities.

COMMENTARY

5.6 The cost of conversion of inventories includes both costs that are directly related to units of production and costs that are indirectly related to units of production. An example of directly related costs is direct labour. Indirectly related costs include a systematic allocation of fixed and variable production overheads incurred in bringing inventories to their present location and condition. Fixed production overheads are indirect costs of production which are usually constant regardless of changes in the volume of production. Examples include depreciation

and maintenance of factory buildings and equipment, and the cost of factory management and administration. Variable production overheads are those indirect costs of production that vary directly or nearly directly with changes in the volume of production. Examples include indirect materials and indirect labour.

5.7 The systematic allocation of production overheads shall be based on the normal capacity of the production facilities. Normal capacity is the production expected to be achieved on average over a number of periods or seasons under normal circumstances, taking into account the loss of capacity resulting from planned maintenance. The amount of fixed overhead allocated to each unit of production is not increased as a consequence of low production of idle plant. Unallocated overheads are recognised as an expense in the period in which they are incurred. In periods of abnormally high production, the amount of fixed overhead allocated to each unit of production is decreased so that inventories are not measured above cost.

5.8 Production overheads which are not allocated to inventories are to be recognised as an expense of the period when they are incurred.

5.9 Where abnormal amounts of waste, whether of material or labour or other expenses, do not relate to bringing inventories to their present condition and location, the costs of the abnormal waste are to be excluded from the cost of conversion and recognised as an expense of the period when they are incurred.

Other Overheads

STANDARD

5.10 Overheads, other than production overheads, shall be included as part of cost of inventories only to the extent that they relate clearly to putting the inventories in their present location and condition.

COMMENTARY

5.11 Overheads other than production overheads are sometimes incurred in bringing inventories to their present location and condition. Examples of items to be included in the cost of inventories are:

- expenditure incurred in designing products for specific customers;
- a proportion of the overhead costs of a manager who is involved in both production and non-production functions.

5.12 Overheads and direct costs that do not relate to putting inventories in their present location and condition are to be excluded from the costs of inventories. Examples of items to be excluded from the cost of inventories are:

- selling expenses, general administrative overheads, research and development costs;

- interest cost in respect of inventories manufactured routinely on a repetitive basis over a short period of time;
- abnormal amounts of waste material, labour or other expenses;
- storage costs, unless those costs are necessary in the production process prior to a further production stage.

Assigning Costs to Inventories

STANDARD

5.13 The cost of items of inventory segregated for specific projects and the cost of items of inventory that are not ordinarily interchangeable shall be ascertained by using specific identification of their individual costs. The cost of all other items of inventory shall be ascertained by using the first-in, first-out (FIFO) cost formula or the weighted average cost formula.

COMMENTARY

5.14 Specific identification is a formula that attributes specific costs to identified items of inventory. This is an appropriate treatment for items of inventory that have been made or acquired for a specific project and are separately identifiable. Specific identification is not appropriate when there are large numbers of items of inventory which are ordinarily interchangeable as the selection of items could be made to obtain predetermined effects on profit.

5.15 The FIFO and weighted average cost formulas make specific assumptions about the flow of interchangeable items of inventory and their associated costs:

(a) The FIFO formula assumes that items of inventory that were taken into inventories first are sold or used first and therefore assumes that the items of inventory remaining at balance date are those most recently acquired or produced.

(b) The weighted average cost formula determines the cost of each item of inventory from the weighted average cost of similar items at the beginning of a period and the cost of similar items acquired or produced during the period. The average may be calculated on a periodic basis, or as each additional batch or shipment is received, depending on the circumstances of the entity.

5.16 Under the above formulas, a number of methods may be applied to determine cost of inventories; these methods include:

- standard costs;
- batch costing; and
- in certain circumstances, discounted selling price.

5.17 Standard costs are predetermined product costs established from bases such as:

- planned products and/or operations;

- planned cost and efficiency levels;
- expected capacity utilisation.

To be acceptable for inventory measurement, standard costs are to be realistically attainable and are to be reviewed regularly and revised to reflect actual costs. Balances in cost variance accounts may affect the measurement of inventories on hand at balance date and their treatment will depend on the nature and causes of the variances. Variances from standard are to be accounted for as revenue or expense in the financial period when they arise, but only when standards have been properly set and maintained. However, when standards have not been revised to reflect changes in the factors used to establish the standard, variances are to be apportioned between the cost of goods sold and inventories.

5.18 The application of the formulas of last-in, first-out (LIFO) or base stock is not permitted by this Standard.

Net Realisable Value

STANDARD

5.19 Net realisable value shall be considered either

(a) on an item-by-item basis; or

(b) by groups of similar items.

Whichever method is used, the method shall be applied consistently and based on the most reliable evidence available at the time of making the estimate of the net realisable value of the inventories. Where items of inventory are expected to be incorporated in other items of inventory, net realisable value shall be determined by reference to the completed item.

COMMENTARY

5.20 Inventories are not to have a carrying value in excess of amounts expected to be recovered. Therefore where cost of inventory items exceeds net realisable value, the cost is to be written down. The net realisable value is to be compared with the cost of individual items of inventory or to groups of similar items to avoid netting losses and unrealised profits.

5.21 The assessment of net realisable value is to be made in relation to the future proceeds as estimated at balance date. The assessment is not to take into account short term fluctuations in sale price at and after balance date except to the extent that these fluctuations may be reflected in the expected selling price.

5.22 Net realisable value is usually the selling price of the items of inventory in the form in which they are expected to be sold, less:

- the costs of completion;
- costs of distribution such as internal sales costs, dispatch costs, transportation costs;

- costs of commission and discounts.

The selling price is to be considered in the light of:

- any existing contracts for future sales of items of inventory;
- the general pattern of sales, inventories and discounts;
- fluctuations in the price of raw materials are to be considered only where these fluctuations affect the selling price of items of inventory in which the raw materials will be incorporated or where the raw materials are expected to be sold in their unprocessed state.

5.23 Normal quantities of materials and other supplies held for incorporation in the production of goods are not usually to be written down below cost if the finished products in which they will be incorporated are expected to be realised at or above cost. However, when a change in the price of materials is an indication that the cost of finished products will exceed net realisable value, the materials inventories are to be written down. In some circumstances, replacement cost may be the best available measure of the net realisable value of those materials.

5.24 Write-downs which are based on the practices outside those described in paragraph 5.19, (for example, write-downs below historical cost that are arrived at by applying an arbitrary percentage to the amounts calculated in accordance with paragraph 5.19 or by undisclosed reductions) are unacceptable because they may result in undisclosed reserves and produce distortions in the financial report.

Recognition as an Expense

STANDARD

5.25 The carrying amount of inventories sold shall be recognised as an expense in the period in which the related revenue is recognised.

COMMENTARY

5.26 The process of recognising the amount of inventories sold as an expense is usually referred to as the matching of costs with revenues. Some inventories may be allocated to other asset accounts, as when, for example, items of inventory are used as components of self-constructed property, plant or equipment.

STANDARD

5.27 The amount of any write-down of inventories to net realisable value and all other losses of inventories shall be recognised as an expense in the period when the write-down or the loss occurs.

5.28 When circumstances which previously caused inventories to be written down below cost no longer exist, the inventories shall be reinstated to the extent that the new carrying amount of those inventories is not more than the lower of original cost or the net realisable value in the current period.

Disclosure

STANDARD

5.29 The following shall be disclosed separately:

(a) the accounting policies adopted for measuring inventories, including the method of determining cost of inventories;

(b) the amount of inventories with separate disclosure of:

- **(i) the total value of inventories; and**
- **(ii) the value of each sub-classification of the total inventories classified in a manner appropriate to the entity;**

(c) the amount of inventories specifically and separately pledged as securities for liabilities;

(d) where applicable the fact that some inventories are subject to retention of title clauses.

COMMENTARY

5.30 The sub-classification of inventories in a financial report provides information on the amounts held in different categories and the changes in these amounts from period to period. Common sub-classifications include materials, work in progress, finished goods, merchandise, land held for resale, consumable stores and supplies. Where a service provider has only inventories of services, these may be described as work in progress.

5.31 The amount of inventories pledged as security for liabilities is to be disclosed when inventories have been charged specifically and separately from other assets of the entity. Retention of title clauses modify expectations that ownership passes with the delivery of goods sold on credit terms. Where inventories are subject to retention of title clauses, for example Romalpa clauses, this is to be disclosed but the value of inventories subject to such clauses need not be disclosed.

APPENDIX

Comparison of FRS-4 with International and Australian Accounting Standards

This comparison appendix, which was prepared as at 30 January 1994 and deals only with significant differences in the standards, is produced for information purposes only and does not form part of the standards in FRS-4. The International Accounting Standard referred to in this Appendix was promulgated by the International Accounting Standards Committee.

The International and Australian accounting standards comparable with FRS-4 are:

- IAS-2 (1993): *Inventories*;
- AASB 1019 (1989): *Measurement and Presentation of Inventories in the Context of the Historical Cost System*; and
- AAS-2 (1989): *Measurement and Presentation of Inventories in the Context of the Historical Cost System.*

There is substantial agreement among these accounting standards and FRS-4. AAS-2, AASB-1019 and FRS-4 are all very similar in content. The following summarises the main differences.

Land Held for Resale

AASB 1019 and AAS-2 require the separate disclosure of land held for resale. This topic is referred to only as commentary in FRS-4 as the topic is dealt with in SSAP-17: *Accounting for Investment Properties and Properties Intended for Sale.*

Finance Costs

FRS-4 deals specifically with interest costs and deferred rebates.

Exclusions

FRS-4 excludes assets available for hire and financial instruments from the application of the standard. AASB 1019 and AAS-2 exclude marketable securities. IAS-2 excludes mineral ores.

Method of Assigning Costs

FRS-4 prohibits the use of the LIFO formula. The Australian standards do not include LIFO as a method of assigning costs to inventories. IAS-2 includes LIFO as an allowed alternative in assigning costs to inventories. IAS-2 requires a number of disclosures where the LIFO method has been used.

Disclosures

AASB 1019 and AAS-2 require only disclosures similar to those in FRS-4 paragraph 5.29(a) and (b).

Additional disclosures required by IAS-2 are:

(a) the carrying amount of inventories carried at net realisable value;

(b) the amount of any reversal of a write-down of inventories and the circumstances that led to the reversal.

HISTORY

Previously issued accounting standards superseded by this Financial Reporting

SSAP-4: Accounting for Inventories (issued April 1986 and effective for periods beginning on or after 1 April 1986).

SSAP-4: Valuation and Presentation of Inventories in the Context of the Historical Cost System (issued November 1975 and effective for periods beginning on or after 1 January 1976).

FRS-4