



CAS - 14

COST ACCOUNTING STANDARD ON POLLUTION CONTROL COST

The following is the Cost Accounting Standard - 14 (CAS - 14) issued by the Council of The Institute of Cost Accountants of India on "POLLUTION CONTROL COST". In this Standard, the standard portions have been set in ***bold italic*** type. This standard should be read in the context of the background material, which has been set in normal type.

1 Introduction

This standard deals with principles and methods of determining the Pollution control costs.

This standard deals with the principles and methods of classification, measurement and assignment of pollution control costs, for determination of Cost of product or service, and the presentation and disclosure in cost statements.

2 Objective

The objective of this standard is to bring uniformity and consistency in the principles and methods of determining the Pollution Control Costs with reasonable accuracy.

3 Scope

This standard should to be applied to cost statements which require classification, measurement, assignment, presentation and disclosure of Pollution Control Costs including those requiring attestation.

4 Definitions

The following terms are being used in this standard with the meaning specified.

4.1 Air pollutant: ***Air Pollutant means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment¹.***

4.2 Air Pollution: ***Air pollution means the presence in the atmosphere of any air pollutant.²***

4.3 Cost Object: ***This includes a product, service, cost centre, activity, sub-activity, project, contract, customer or distribution channel or any other unit in relation to which costs***

¹ Section 2 (a) of The Air (Prevention and Control of Pollution) Act, 1981

² Section 2 (b) of The Air (Prevention and Control of Pollution) Act, 1981



*are ascertained.*³

- 4.4 Direct Expenses:** *Expenses relating to manufacture of a product or rendering a service, which can be identified or linked with the cost object other than direct material cost and direct employee cost.*⁴
- 4.5 Environment:** *Environment includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.*⁵
- 4.6 Environmental Pollutant:** *Environmental Pollutant means any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment.*⁶
- 4.7 Environment Pollution:** *Environmental pollution means the presence in the environment of any environmental pollutant.*⁷
- 4.8 Finance Costs:** *Costs incurred by an enterprise in connection with the borrowing of funds.* This will include interest and commitment charges on bank borrowings, other short term and long term borrowings, amortisation of discounts or premium related to borrowings, amortisation of ancillary cost incurred in connection with the arrangements of borrowings, finance charges in respect of finance leases, other similar arrangements and exchange differences arising from foreign currency borrowings to the extent they are regarded as an adjustment to the interest costs.⁸ The terms Finance costs and Borrowing costs are used interchangeably.
- 4.9 Imputed Costs:** *Hypothetical or notional costs, not involving cash outlay, computed for any purpose.*⁹
- 4.10 Normal capacity:** *Normal Capacity is the production achieved or achievable on an average over a number of periods or seasons under normal circumstances taking into*

³ Adapted from CIMA Terminology

⁴ Adapted from Paragraph 4.4 of CAS - 10

⁵ Section 2 (a) of The Environment (Protection) Act, 1986

⁶ Section 2 (b) of The Environment (Protection) Act, 1986

⁷ Section 2 (c) of The Environment (Protection) Act, 1986

⁸ Adapted from CIMA Terminology

⁹ Adapted from CAS 1 paragraph 6.5.13



account the loss of capacity resulting from planned maintenance¹⁰.

4.11 Pollution Control: *Pollution Control means the control of emissions and effluents into environment. It constitutes the use of materials, processes, or practices to reduce, minimize, or eliminate the creation of pollutants or wastes. It includes practices that reduce the use of toxic or hazardous materials, energy, water, and / or other resources.*

4.12 Production overheads: *Indirect costs involved in the production process or in rendering service.¹¹*

The terms Production Overheads, Factory Overheads, Works Overheads and Manufacturing Overheads denote the same meaning and are used interchangeably.

Production overheads shall include administration cost relating to production, factory, works or manufacturing.

4.13 Soil Pollutant: *Soil Pollutant is a substance such as cadmium, copper, arsenic, mercury, oil and organic solvent, which is the source of soil contamination.*

4.14 Soil Pollution: *Soil pollution means the presence of any soil pollutant(s) in the soil which is harmful to the living beings when it crosses its threshold concentration level.*

4.15 Standard Cost: *A predetermined cost of resource inputs for the cost object computed with reference to set of technical specifications and efficient operating conditions.*

Standard costs are used as scale of reference to compare the actual costs with the standard cost with a view to determine the variances, if any, and analyse the causes of variances and take proper measure to control them. Standard costs are also used for estimation.

4.16 Water pollution: *Pollution means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of*

¹⁰ Adapted from CAS 2 paragraph 4.4

¹¹ Adapted from CAS-1 Para 6.3.3 and 6.3.4

aquatic organisms.¹²

5 Principles of Measurement:

5.1 *Pollution Control costs shall be the aggregate of direct and indirect cost relating to Pollution Control activity.*

Direct cost includes the cost of materials, consumable stores, spares, manpower, equipment usage, utilities, resources for testing & certification and other identifiable resources consumed in activities such as waste processing, disposal, remediation and others.

Indirect cost includes the cost of resources common to various Pollution Control activities such as Pollution Control Registration and such like expenses.

5.2 *Costs of Pollution Control which are internal to the entity should be accounted for when incurred. They should be measured at the historical cost of resources consumed.*

5.3 *Future remediation or disposal costs which are expected to be incurred with reasonable certainty as part of Onerous Contract or Constructive Obligation, legally enforceable shall be estimated and accounted based on the quantum of pollution generated in each period and the associated cost of remediation or disposal in future.*

For example future disposal costs of solid waste generated during the current period should be estimated on, say, a per tonne basis.

5.4 *Contingent future remediation or disposal costs e.g. those likely to arise on account of future legislative changes on pollution control shall not be treated as cost until the incidence of such costs become reasonably certain and can be measured.*

External costs of pollution which are generally the costs imposed on external parties including social costs are difficult to estimate with reasonable accuracy and are excluded from general purpose cost statements.

Social costs of pollution are measured by economic models of cost measurement. The cost by way of compensation by the polluting entity either under future legislation or under social pressure cannot be quantified by traditional models of cost measurement. They are best kept out of general purpose cost statements.

¹² Section 2 (e) of The Water (Prevention and Control of Pollution) Act, 1974



- 5.5** *Cost of in-house Pollution Control activity shall include cost of materials, consumable stores, spares, manpower, equipment usage, utilities, and other resources used in such activity.*
- 5.6** *Cost of Pollution Control activity carried out by outside contractors inside the entity shall include charges payable to the contractor and cost of materials, consumable stores, spares, manpower, equipment usage, utilities, and other costs incurred by the entity for such jobs.*
- 5.7** *Cost of Pollution Control jobs carried out by contractor at its premises shall be determined at invoice or agreed price including duties and taxes, and other expenditure directly attributable thereto net of discounts (other than cash discount), taxes and duties refundable or to be credited. This cost shall also include the cost of other resources provided to the contractors.*
- 5.8** *Cost of Pollution Control jobs carried out by outside contractors shall include charges made by the contractor and cost of own materials, consumable stores, spares, manpower, equipment usage, utilities and other costs used in such jobs.*
- 5.9** *Each type of Pollution Control e.g. water, air, soil pollution shall be treated as a distinct activity, if material and identifiable.*
- 5.10** *Finance costs incurred in connection with the Pollution Control activities shall not form part of Pollution Control costs.*
- 5.11** *Pollution Control costs shall not include imputed costs.*
- 5.12** *Price variances related to Pollution Control, where standard costs are in use, shall be treated as part of Pollution Control cost. The portion of usage variances attributable to normal reasons shall be treated as part of Pollution Control cost. Usage variances attributable to abnormal reasons shall be excluded from Pollution Control cost.*
- 5.13** *Subsidy / Grant / Incentive or amount of similar nature received / receivable with respect to Pollution Control activity, if any, shall be reduced for ascertainment of the cost of the cost object to which such amounts are related.*



- 5.14 Any Pollution Control cost resulting from abnormal circumstances, if material and quantifiable, shall not form part of the Pollution Control cost.**
- 5.15 Fines, penalties, damages and similar levies paid to statutory authorities or other third parties shall not form part of the Pollution Control cost.**
- 5.16 Credits / recoveries relating to the Pollution Control activity, material and quantifiable, shall be deducted to arrive at the net Pollution Control cost.**
- 5.17 Research and development cost to develop new process, new products or use of new materials to avoid or mitigate pollution shall be treated as research and development costs and not included under pollution control costs. Development costs incurred for commercial development of such product, process or material shall be included in pollution control costs.**
- 5.18 Any change in the cost accounting principles applied for the measurement of the Pollution Control cost should be made only if, it is required by law or for compliance with the requirements of a cost accounting standard, or a change would result in a more appropriate preparation or presentation of cost statements of an organisation.**

6 Assignment of costs

- 6.1 Pollution Control costs shall be traced to a cost object to the extent economically feasible.**

Direct costs of pollution control such as treatment and disposal of waste shall be assigned directly to the product, where traceable economically.

Where these costs are not directly traceable to the product but are traceable to a process which causes pollution, the costs shall be assigned to the products passing through the process based on the quantity of the pollutant generated by the product.

- 6.2 Where the Pollution Control cost is not directly traceable to cost object, it shall be treated as overhead and assigned based on either of the following two principles;**
- i) Cause and Effect - Cause is the process or operation or activity and effect is the incurrence of cost.**
 - ii) Benefits received – overheads are to be apportioned to the various cost objects in proportion to the benefits received by them.**



Typical of such costs are costs such as administration costs relating to pollution control activities, costs of certification such as ISO 14000 and registration fees payable to pollution control authorities

6.3 If the Pollution Control cost (including the share of the cost of reciprocal exchange of services) is shared by several cost objects, the related cost shall be measured as an aggregate and distributed among the cost objects as per principles laid down in Cost Accounting Standard – 3.

7 Presentation

7.1 Pollution Control cost, if material, shall be presented in the cost statement as a separate item of cost.

7.2 Pollution control costs shall be presented duly classified as follows:

- a) Direct and Indirect cost**
- b) Internal and External costs**
- c) Current and future costs**
- d) Domain area e.g. water, air and soil.**

7.3 Activity wise details of Pollution Control cost, if material, shall be presented separately.

8 Disclosures

8.1 The cost statements shall disclose the following:

- 1. The basis of distribution of Pollution Control cost to the cost objects/ cost units.**
- 2. Where standard cost is applied in Pollution Control cost, the price and usage variances.**
- 3. Pollution Control cost of Jobs done in-house and outsourced separately.**
- 4. Pollution Control cost paid/ payable to related parties¹³.**
- 5. Pollution Control cost incurred in foreign exchange.**
- 6. Any Subsidy / Grant / Incentive or any amount of similar nature received / receivable reduced from Pollution Control cost.**
- 7. Any credits / recoveries relating to the Pollution Control cost.**
- 8. Any abnormal portion of the Pollution Control cost.**
- 9. Penalties and damages excluded from the Pollution Control cost.**

¹³ Related party as per the applicable legal requirements relating to the cost statement as on the date of the statement



- 8.2** *Disclosures shall be made only where material, significant and quantifiable.*
- 8.3** *Cost incurred on pollution control relating to prior periods and taken to reconciliation directly shall be disclosed separately.*
- 8.4** *Where estimates are made of future costs to be incurred on pollution control, the basis of estimate shall be disclosed separately.*
- 8.5** *If a descriptive note dealing with the social cost of pollution caused by the entity and the control of such pollution is contained in the same document as the cost statement, the cost Statement shall carry a reference to such descriptive note.*
- 8.6** *Disclosures shall be made in the body of the Cost Statement or as a foot note or as a separate schedule.*
- 8.7** *Any change in the cost accounting principles and methods applied for the measurement and assignment of the Pollution Control cost during the period covered by the cost statement which has a material effect on the Pollution Control cost shall be disclosed. Where the effect of such change is not ascertainable wholly or partly the fact shall be indicated.*