



SCA –112
Standard on Cost Auditing on
“Analytical Procedures”

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The following is the **Standard on Cost Auditing, “Analytical Procedures”**. 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 the cost auditor’s use of analytical procedures as substantive procedures and cost auditor’s responsibility to design and perform analytical procedures near the end of the audit that will assist in forming an overall opinion on the cost statements.

2. Objective

The objectives of this standard are to enable the cost auditor;

- a) To obtain relevant and reliable audit evidence when using substantive analytical procedures; and***
- b) To design and perform analytical procedures near the end of the cost audit that assist the cost auditor when forming an overall opinion as to whether the cost statements are in consistent with the cost auditor’s understanding of the entity and its business.***

3. Scope

This Standard deals with the cost auditor’s use of analytical procedures as substantive procedures (“substantive analytical procedures”). It also deals with the cost auditor’s responsibility to perform analytical procedures near the end of the audit that assist the cost auditor when forming an overall opinion on the cost statements, in risk assessment and guidance regarding the nature, timing and extent of audit procedures in response to assessed risks.

4. Definition

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

- 4.1. Analytical Procedures: means evaluation of cost information through analysis of possible relationship among both cost and non-cost data. Analytical procedures also encompass such investigation as is necessary of identified fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount.***
- 4.2. Appropriateness (of audit evidence): The measure of the quality of audit evidence; that is, its relevance and its reliability in providing support for the conclusions on which the cost auditor’s opinion is based.***
- 4.3. Audit: Audit is an independent examination of financial, cost and other related information of an entity whether profit oriented or not, irrespective of its size or legal form, when such an examination is conducted with a view to expressing an opinion thereon.***



- 4.4. Audit Evidence:** Information used by the cost auditor in arriving at the conclusions on which the cost auditor's opinion is based. Audit evidence includes both information contained in the cost accounting records underlying the cost statements and all other related information.
- 4.5. Cost Audit:** Cost audit is an independent examination of cost statements, cost records and other related information of an entity including a non-profit entity, when such an examination is conducted with a view to expressing an opinion thereon.
- 4.6. Cost Auditor:** "Cost Auditor" means an auditor appointed to conduct an audit of cost records and shall be a cost accountant within the meaning of The Cost and Works Accountants Act 1959. "Cost Accountant" is a cost accountant as defined in clause (b) of sub-section (1) of section 2 of The Cost and Works Accountants Act, 1959 (23 of 1959) and who holds a valid certificate of practice under subsection (1) of section 6 and who is deemed to be in practice under subsection (2) of section 2 of that Act and includes a firm of cost accountants.
- 4.7. Cost Records:** "Cost Records" means books of accounts relating to utilization of materials, labour and other items of cost, to facilitate calculation of true and fair cost of production or cost of operations, cost of sales, and margin for each product or service or activity, produced or provided by an entity including a non-profit entity, for any period, in compliance with Cost Accounting Standards issued by the Institute.
- 4.8. Cost Statements:** Cost Statements, in relation to an entity, includes plant-wise, factory wise or service Centre wise
- i) quantitative details of capacity, production, trade purchases, sales and stock;
 - ii) quantitative, rates and value details of consumption of materials, utilities, and other inputs;
 - iii) cost sheet showing element-wise, total as well as per unit, cost of production of goods or provision of services, cost of sales and margin for each product or service;
 - iv) reconciliation of profits, or in case of an entity carrying on any activity not for profit, of surplus, as per cost accounts and as per financial accounts;
 - v) reconciliation of indirect taxes showing details of total clearance of goods/services, assessable value, duties/ taxes paid, CENVAT or VAT or Service Tax credit utilized, duties/taxes recovered and interest / penalty paid;
 - vi) statement of value addition and distribution of earnings;
 - vii) details of purchases and sales of goods and services with related parties showing transfer price vis-à-vis normal price; and



viii) *any explanatory note annexed to, or forming part of, any document referred to in (i) to (vii) above.*

4.9. Management: *The person(s) with executive responsibility for the conduct of the entity's operations. For some entities in some jurisdictions, management includes some or all of those charged with governance.*

4.10. Misstatement: *A difference between the amounts, classification, presentation or disclosure of a reported cost statement item and the amount, classification, presentation, or disclosure that is required for the item to be in accordance with the applicable cost reporting framework. Misstatements can arise from error or fraud.*

Where the cost auditor expresses an opinion on whether the cost statements give a true and fair view, misstatements also includes those adjustments of amounts, classifications, presentations, or disclosure that, in the cost auditor's judgement, are necessary for the cost statements to be presented fairly, in all material respects, or to give a true and fair view.

4.11. Substantive Procedure: *Substantive procedures are intended to create evidence that an auditor assembles to support the assertion that there are no material misstatements in regard to the completeness, validity, and accuracy of the cost records of an entity. Thus, substantive procedures are performed by an auditor to detect whether there are any material misstatements in transactions. It comprises of:*

- (i) Tests of details (of classes of transactions, account balances, and disclosures); and*
- (ii) Substantive analytical procedures. (Substantive analytical procedures are types of analytical procedures being used as a substantive procedure to obtain evidence about particular assertions related to account balances or classes of transactions.)*

5. Requirements

Substantive Analytical Procedures

5.1. When designing and performing substantive analytical procedures, either alone or in combination with test of details, as substantive procedures in accordance with other SCAs, the cost auditor shall: (Refer para 6.4.-6.5)

- a) Determine the suitability of particular substantive analytical procedures for given assertions, taking account of the assessed risks of material misstatement and tests of details, if any, for these assertions; (Refer para 6.6-6.10)**
- b) Evaluate the reliability of cost data from which the cost auditor's expectation of recorded amounts or ratios are developed, taking account of source, comparability, and nature and relevance of cost information available, and controls over preparation; (Refer para 6.11-6.13)**



- c) Develop an expectation of recorded amounts or ratios and evaluate whether the expectation is sufficiently precise to identify a misstatement that, individually or when aggregated with other misstatements, may cause the cost statements to be materially misstated; and (Refer para 6.14)*
- d) Determine the amount of any difference of recorded amounts from expected values that is acceptable without further investigation as required by paragraph 5.3. (Refer para 6.15)*

Analytical Procedures that Assist When Forming an Overall Opinion

- 5.2.** *The cost auditor shall design and perform analytical procedures near the end of audit that assist the cost auditor when forming an overall opinion as to whether the cost statements are consistent with the cost auditor's understanding of the entity and its business. (Refer para 6.16-6.18)*

Investigating Results of Analytical Procedures

- 5.3.** *If analytical procedures performed in accordance with this standard identify fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount, the cost auditor shall investigate such differences by:*
- a) Inquiring of management and obtaining appropriate audit evidence relevant to management's responses; and*
 - b) Performing other audit procedures as necessary in the circumstances. (Refer para 6.19-6.20)*

6. Application Guidance

Definition of Analytical Procedures

- 6.1** Analytical procedures include the consideration of comparisons of the entity's cost information with, for example:
- a) Comparable cost information for previous years or periods.*
 - b) Anticipated results of the entity, such as cost of production / operation, input – output norms of major items of cost, etc.*
 - c) Similar industry consumption norms or with industry averages of major items of cost or cost of goods sold or with other entities of comparable size in the same industry.*
- 6.2** Analytical procedures also include consideration of relationships, for example:
- a) Among items of cost that would be expected to conform to standard consumption norms based on the entity's experience.*



b) Between items of cost or non-cost, such as payroll costs to number of employees.

6.3 Various methods may be used to perform analytical procedures. These methods range from performing simple comparisons to performing complex analyses using advanced statistical techniques. Analytical procedures may be applied to overall cost of production or operation of all products, each products or services provided. Comparison with previous year's cost of production or operation for each product or service.

Substantive Analytical Procedures

6.4 The cost auditor's substantive procedures at the assertion level may be tests of details, substantive analytical procedures, or a combination of both. The decision about which audit procedures to perform, including whether to use substantive analytical procedures, is based on the cost auditor's judgment about the expected effectiveness and efficiency of the available audit procedures to reduce audit risk at the assertion level to an acceptably low level. (Refer para 5.1)

6.5 The cost auditor may inquire from management as to the availability and reliability of cost information needed to apply substantive analytical procedures, and the results of any such analytical procedures performed by the entity. It may be effective to use analytical data prepared by management, provided the cost auditor is satisfied that such data is properly prepared. (Refer para 5.1)

Suitability of Particular Analytical Procedures for Given Assertions

6.6 The application of planned analytical procedures is based on the expectation that relationships among cost data exist and continue in the absence of known conditions to the contrary. However, the suitability of a particular analytical procedure will depend upon the cost auditor's assessment of how effective it will be in detecting a misstatement that, individually or when aggregated with other misstatements, may cause the cost statements to be materially misstated. [Refer para 5.1(a)]

6.7 In some cases, even an unsophisticated predictive model may be effective as an analytical procedure. For example, where an entity has a known number of employees at fixed rates of pay throughout the period, it may be possible for the cost auditor to use this data to estimate the total employee's costs for the period with a high degree of accuracy, thereby providing audit evidence for major items of cost in the cost statements and reducing the need to perform tests of details on the payroll. The use of widely recognized analysis for number employees looking at recruitments done, number of people left, the labour turnover ratios, the data on idle time, absenteeism, manpower productivity reports, use of temporary or casual labour can often be used effectively in substantive analytical procedures to provide audit evidence to support the reasonableness of recorded costs. [Refer para 5.1(a)]



- 6.8 Different types of analytical procedures provide different levels of assurance. Analytical procedures involving material cost % to total cost, material wastage as % to total input, contribution per unit of material used, production per man hour, production per employee, employee cost % to cost of goods sold, Idle hours % to total available hours, production per machine hour, growth in machine capacity utilisation, machine downtime ratio, break-down hours etc. can provide persuasive evidence or may eliminate the need for further verification by means of tests of details, provided the ratios are correctly calculated. [Refer para 5.1(a)]
- 6.9 The determination of the suitability of particular substantive analytical procedures is influenced by the nature of the assertion and the cost auditor's assessment of the risk of material misstatement. For example, if controls over receipts and issues of materials are deficient, the cost auditor may place more reliance on tests of details rather than on substantive analytical procedures for assertions related to consumption. [Refer para 5.1(a)]
- 6.10 Particular substantive analytical procedures may also be considered suitable when tests of details are performed on the same assertion. For example, when obtaining audit evidence regarding the valuation for work-in-progress and inventory valuation, the cost auditor may apply analytical procedures to a stage of work completion in addition to performing tests of details on subsequent cost incurrence to determine the stage of work completion. [Refer para 5.1(a)]

The Reliability of the Data

- 6.11 The reliability of cost data is influenced by its source and nature and is dependent on the circumstances under which it is obtained. Accordingly, the following are relevant when determining whether cost data is reliable for purposes of designing substantive analytical procedures:
- a) Source of the cost information available. For example, information may be more reliable when it is obtained from independent sources;
 - b) Comparability of the cost information available. For example, Standard consumption norms to be comparable with the actual results;
 - c) Nature and relevance of the cost information available. For example, whether budgeted consumption norms have been established to compare the actual results to be achieved; and
 - d) Controls over the preparation of the cost information that are designed to ensure its completeness, accuracy and validity. For example, controls over the preparation, review and maintenance of budgeted norms for items of costs. [Refer para 5.1(b)]



- 6.12 The cost auditor may consider testing the operating effectiveness of controls, if any, over the entity's preparation of cost information used by the cost auditor in performing substantive analytical procedures in response to assessed risks. When such controls are effective, the cost auditor generally has greater confidence in the reliability of the cost information and, therefore, in the results of analytical procedures. The operating effectiveness of controls over non-cost information may often be tested in conjunction with other tests of controls. For example, in establishing controls over the issues of major items of raw materials from store, an entity may include controls over the recording of consumption for such items. In these circumstances, the cost auditor may test the operating effectiveness of controls over the recording of unit for such items of raw materials consumption in conjunction with tests of the operating effectiveness of controls over the issues of such items of raw materials from store. Alternatively, the cost auditor may consider whether the cost information was subjected to audit testing. [Refer para 5.1(b)]
- 6.13 The matters discussed in paragraphs 6.11(a)–6.11(d) are relevant irrespective of whether the cost auditor performs substantive analytical procedures on the entity's year end cost statements, or at an interim date and plans to perform substantive analytical procedures for the remaining period. [Refer para 5.1(b)]

Evaluation Whether the Expectation is Sufficiently Precise

- 6.14 Matters relevant to the cost auditor's evaluation of whether the expectation can be developed sufficiently precisely to identify a misstatement that, when aggregated with other misstatements, may cause the cost statements to be materially misstated, include:
- a) The accuracy with which the expected results of substantive analytical procedures can be predicted. For example, the cost auditor may expect greater consistency in consumption of substantive items of raw materials from one period to another than in comparing discretionary cost, such as research or development or quality costs.
 - b) The degree to which cost information can be disaggregated. For example, substantive analytical procedures may be more effective when applied to cost information on individual items of cost or cost heads or to cost statements or components of cost of diversified products, than when applied to the cost statements of the entity as a whole.
 - c) The availability of the information, both cost and non-cost. For example, the cost auditor may consider whether cost information, such as budgeted norms for items of cost or standard norms, and non-cost information, such as the number of units produced or sold, is available to design substantive analytical procedures. If the cost information is available, the cost auditor may also consider the



reliability of the cost information as discussed in paragraphs 6.11–6.12 above.
[Refer para 5.1(c)]

Amount of Difference of Recorded Amount from Expected Values that is Acceptable

6.15 The cost auditor’s determination of the amount of difference from the expectation that can be accepted without further investigation is influenced by materiality and the consistency with the desired level of assurance, taking account of the possibility that a misstatement, individually or when aggregated with other misstatements, may cause the cost statements to be materially misstated. The cost auditor requires obtaining more persuasive audit evidence the higher the cost auditor’s assessment of risk. Accordingly, as the assessed risk increases, the amount of difference considered acceptable without investigation decreases in order to achieve the desired level of persuasive evidence. [Refer para 5.1(d)]

Analytical Procedures that Assist When Forming an Overall Opinion

- 6.16 The opinion drawn from the results of analytical procedures designed and performed in accordance with paragraph 5.2 are intended to corroborate conclusions formed during the cost audit of individual items of cost or cost heads or elements of the cost statements. This assists the cost auditor to draw reasonable conclusions on which to base the cost auditor’s opinion. (Refer para 5.2)
- 6.17 The results of such analytical procedures may identify a previously unrecognized risk of material misstatement. In such circumstances, the cost auditor requires to revise the cost auditor’s assessment of the risks of material misstatement and modify the further planned audit procedures accordingly. (Refer para 5.2)
- 6.18 The analytical procedures performed in accordance with paragraph 5.2 may be similar to those that would be used as risk assessment procedures. (Refer para 5.2)

Investigating Results of Analytical Procedures

- 6.19 Audit evidence relevant to management’s responses may be obtained by evaluating those responses taking into account the cost auditor’s understanding of the entity and its environment, and with other audit evidence obtained during the course of the cost audit. (Refer para 5.3)
- 6.20 The need to perform other audit procedures may arise when, for example, management is unable to provide an explanation, or the explanation, together with the audit evidence obtained relevant to management’s response, is not considered adequate. (Refer para 5.3)

7. Effective Date

This standard is effective for audits on or after.....



8. Statement of Modifications: Modifications to ISA 520, “Analytical Procedures”

The ISAs have been developed with focus on Auditing of Financial Statements, while the focus of SCAs is on Auditing of Cost Statements. Hence, following changes are introduced across all the SCAs:

1. Change of ‘terms’ used in the ISAs that have corresponding meaning in cost audit vis-à-vis financial audit, such as Auditor with Cost Auditor, Audit with Cost Audit, Financial Statements with Cost Statements, Financial Reporting with Cost Reporting, Audit Procedures with Cost Audit Procedures, Auditor’s Responsibility with Cost Auditor’s Responsibility, etc.;
2. Corresponding modification in definitions of similar terms, examples used and in the Application Guidance;
3. Unlike the practice followed in ISAs, definitions of all 'terms' relevant to this SCA are reproduced.

Deletions:

- Paragraph (A11) on “*Considerations Specific to Public Sector Entities*” has been deleted as not relevant to the Audit of Cost Statements in Indian context.
