Auditing
A Practical Approach

Third Canadian Edition

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Chapter 11

AUDITING INVENTORIES AND PROPERTY, PLANT, AND EQUIPMENT

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LEARNING OBJECTIVES (1 of 2)

1. Identify the audit objectives applicable to inventories
2. Describe the functions and control procedures normally found for custody and maintenance of inventory records
3. Discuss considerations relevant to determining the audit strategy for inventories
4. Design a substantive audit program for inventories

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LEARNING OBJECTIVES (2 of 2)

5. Identify the audit objectives applicable to properly, plant, and equipment
6. Discuss considerations relevant to determining the audit strategy for property, plant, and equipment
7. Design a substantive audit program for property, plant, and equipment

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Audit Objectives: Inventory (1 of 3)

- Overall, the audit objectives in respect of inventories is to ensure they actually exist, are owned, and are properly valued

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Audit Objectives: Inventory (2 of 3)

Transaction and Related Disclosure Objectives	
Occurrence (**OE**)	Recorded purchase transactions represent inventories acquired during the period (**OE1**).
	Recorded transfers represent inventories transferred between locations or categories during the period (**OE2**).
	Recorded sale transactions represent inventories sold during the period (**OE3**).
	Disclosed inventories have occurred and pertain to the entity (**OE4**)
Completeness (**C**)	All inventory receipts during the period have been recorded as purchases (**C1**).
	All transfers of inventories between locations or categories during the period have been recorded (**C2**).
	All inventory shipped during the period has been recorded as sales (**C3**).
Accuracy (**AV**)	Inventory transactions are properly (accurately) recorded (**AV1**).
Cut-off (**CO**)	Inventories received before the period end are recorded as purchases in the current period and those received after the period end are included in the next accounting period (**CO1**).
	Inventories shipped before the period end are recorded as sales in the current period and those shipped after the period end are included in the next accounting period (**CO2**).
Classification (**D**)	Inventory transactions are recorded in the correct accounts (**D1**).
Presentation (**D**)	Purchase and inventory transactions and events are appropriately aggregated or disaggregated, clearly described and the related disclosures are relevant and understandable (**D2**).

Selected specific audit objectives for inventory

Audit Objectives: Inventory (3 of 3)

Account Balance-Related Disclosure Objectives	
Existence (**OE**)	Inventories recorded represent items on hand at the end of the reporting period (**OE5**).
Rights and obligations (**RO**)	The entity has rights to the inventories included in the balance sheet (**RO1**).
Completeness (**C**)	Inventories include all materials, products, and supplies on hand at the end of the reporting period (**C4**).
	All inventory disclosures that should have been included in the financial statements have been included (**C5**).
Accuracy, valuation, and allocation (**AV**)	Inventories are properly stated at the lower of cost and net realizable value, determined in accordance with applicable accounting standards (**AV2**).
	Inventories are disclosed accurately and at appropriate amounts (**AV3**).
Classification (**D**)	Inventories are properly identified and classified in the financial statements (**D3**).
Presentation (**D**)	Inventories are appropriately aggregated or disaggregated, clearly described and the related disclosures are, relevant and understandable (**PD4**).

Selected specific audit objectives for inventory

Custody of Inventory and Maintenance of Records (1 of 5)

- Merchandising entity – inventory consists of goods acquired for resale
- Manufacturing entity – inventory consists of raw materials, work in process and finished goods

Custody of Inventory and Maintenance of Records (2 of 5)

- Computerized records are easier to maintain as perpetual inventory records typically include detailed records including quantities and values
- Manufacturing entities need to have a system that can track the movement of goods through the production process

Custody of Inventory and Maintenance of Records (3 of 5)

- An important control is the segregation of the inventory record function from the physical custody of the inventory
- Prevents the opportunity to conceal inventory shortages by manipulating the records

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Custody of Inventory and Maintenance of Records (4 of 5)

- For goods received, the initialled receiving report indicates acknowledgement of the receipt of goods, their quantity, and related cost
- Shipping documents serve as the authorization of the release of goods from inventory and the entry to reduce inventory on hand

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Custody of Inventory and Maintenance of Records (5 of 5)

- Pre-numbered inventory transfer requisitions control the movement of goods from raw materials through to work in process and finished goods
- Each transfer requisition with the use of tickets indicates the specific material and labour requirements for the goods produced
- Initialled copies of these tickets provide the basis for the related accounting entries

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Physical Inventory Compared to Inventory Records (1 of 9)

- Perpetual inventory records need to be compared to actual inventory at regular intervals
- Two key functions involved:
  - An inventory count
  - A comparison of actual items on hand to inventory records

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Physical Inventory Compared to Inventory Records (2 of 9)

- Common inventory count procedures include:
  - Assigning and communicating responsibly
    - Overall responsibility should be assigned to a person without custody or inventory recording responsibilities
    - Instructions related to specific count procedures need to be drawn up and explained to each person involved
    - Inventory area(s) need to be subdivided and assigned to specific teams

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Physical Inventory Compared to Inventory Records (3 of 9)

- Common inventory count procedures include:
  - Preparing
    - Items not to be counted should be clearly marked
    - Arrangements should be made to cease production if possible and shipping and receiving should avoid moving goods during this time

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Physical Inventory Compared to Inventory Records (4 of 9)

- Common inventory count procedures include (continued):
  - Identifying
    - Inventory to be counted must be properly identified
    - Recommend tagging goods in advance

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Physical Inventory Compared to Inventory Records (5 of 9)

- Common inventory count procedures include (continued):
  - Counting
    - Instructions should include the units of measure for each type of good
    - Count teams often work in pairs to ascertain quantity
    - Thoroughness is important – need to consider if cartons need to be opened at random or weighed to verify that they are full and the contents match that described

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Physical Inventory Compared to Inventory Records (6 of 9)

- Common inventory count procedures include (continued):
  - Checking
    - Often all counts are double checked and all discrepancies recounted, if errors are unlikely spot checks are used

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Physical Inventory Compared to Inventory Records (7 of 9)

- Common inventory count procedures include:
  - Clearing
    - As items are counted, teams should leave a mark to prevent duplicate counting
    - Supervisor should tour completed areas to ensure no items appear to be uncounted
  - Recording
    - Control over count sheets is key
    - Counters and checkers should sign or initial each sheet or tag

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Physical Inventory Compared to Inventory Records (8 of 9)

- Common inventory count procedures include:
  - Cut-off
    - Serial numbers of the last receiving report, shipping documents, and inventory transfer requisitions issued before the inventory count need to be recorded to ensure count is compared with inventory records of the same basis
- Need to compare inventory record to count in order to help identify any errors

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Physical Inventory Compared to Inventory Records (9 of 9)

- Recounts are normally required for material differences
- If the difference still remains, it needs to be investigated and documented
- A list of errors is kept

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Determining Inventory Costs (1 of 3)

- Merchandise inventory purchases should be properly recorded and the costs of sales determined by an appropriate cost flow assumption – for example using FIFO or weighted average
- Manufacturing inventory costs are more complex

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Determining Inventory Costs (2 of 3)

- Common procedures for manufacturing inventory include:
  - Determine the cost of materials entered into raw materials
  - Determine the cost of materials transferred to working process (FIFO or weighted average cost)
  - Record the costs of direct labour applied to work in process
  - Identify abnormal waste or spillage in the production process

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Determining Inventory Costs (3 of 3)

- Common procedures for manufacturing inventory include:
  - Identify manufacturing overhead costs and apportion costs to production departments
  - Assign overhead costs to work in process
  - Apportion costs by products
  - Relieve work in process and charge finished goods upon completion
  - Relieve finished goods with cost of sales

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Audit Strategy: Inventory (1 of 6)

- Inventory and costs of sales are normally significant to most entities
- Factors contributing to the risk of material misstatement include:
  - Typically high volume of transactions
  - Contentious valuation and allocation issues
  - Special procedures are often required to determine quantity or value

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Audit Strategy: Inventory (2 of 6)

- Factors contributing to the risk of material misstatement include:
  - Inventories are often stored at multiple locations
  - Inventories are vulnerable to spoilage, obsolesce, and economic conditions
  - Sold inventory may be subject to return and repurchase agreements
- Overall management has a great incentive to overstate inventory

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Audit Strategy: Inventory (3 of 6)

- Typical audit strategies to verify existence include one of three strategies:
  1. Determine inventory quantities using perpetual records if inventory is not to be counted at or close to the end of the reporting period
     - Requires an assessment of CR over inventory records as being low

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Audit Strategy: Inventory (4 of 6)

- Typical audit strategies to verify existence include one of three strategies cont'd:
  2. Determine inventory quantities by a physical count near the end of the reporting period and adjust balance sheet quantities using count references
     - Requires an assessment of CR over inventory records or of purchase and sales at less than high level

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Audit Strategy: Inventory (5 of 6)

- Typical audit strategies to verify existence include one of three strategies cont'd:
  3. Determine inventory quantities by a physical count at or within a few days of the end of the reporting period
     - Substantive approach
- Note more than one strategy may be used at an entity

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Audit Strategy: Inventory (6 of 6)

- Specialized inventories may require the use of an expert in determining quantity or value
- CAS 620, using the work of an auditor's expert, indicates that the nature and scope of the work needs to be clearly agreed by both parties

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Control Risk Assessment (1 of 4)

- Assessment of control risk is key, especially if an entity does not intend to perform an inventory count at or close to year end
- If the preliminary assessment supports reliance on inventory records, then the auditor would draft an audit program incorporating various tests of control effectiveness – see the following slides for an example

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Control Risk Assessment (2 of 4)

				Relevant Audit Objective (from Table 11.1)				
Function	WCGW	Necessary Control	Possible Test of Operating Effectiveness	OE No.	C No.	AV No.	CO No.	D No.
Recording movement of goods into inventory	Failure to record goods	Use of pre-numbered receiving reports and inventory transfer requisitions	Re-perform test of numerical continuity.		✓1, 2		✓1	
		Independent reconciliation of inventory records with control account in general ledger	Re-perform.*	✓1, 2, 3	✓1, 2, 3	✓1	✓1, 2	

Control risk assessment considerations

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Control Risk Assessment (3 of 4)

				Relevant Audit Objective (from Table 11.1)				
Function	WCGW	Necessary Control	Possible Test of Operating Effectiveness	OE No.	C No.	AV No.	CO No.	D No.
Recording movement of goods from inventory	Unauthorized removal of goods	Custodian required to acknowledge responsibility for receipt of goods into inventory	Inspect receiving reports and inventory transfer requisitions for custodian's initials.	✓1, 2			✓1	
		Custodian required to obtain receipt for all requests to move inventory out of storage	Vouch recorded removals with properly authorized shipping documents and inventory transfer requisitions.*	✓2, 3			✓2	
		Physical comparison of inventory with inventory records	Observe. Re-perform.*	✓1, 2, 3	✓1, 2, 3		✓1, 2	

Control risk assessment considerations

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Control Risk Assessment (4 of 4)

Physical comparison of inventory with inventory records	Unreliable count procedures	Responsibility independent from maintenance of inventory records and custodianship of inventory	Observe.	✓5	✓4			
		Adequate instructions properly issued and followed	Observe. Re-perform.*	✓5	✓4			
	Inadequate investigation and correction	Proper record maintained of differences and their correction	Inspect. Re-perform.*	✓5	✓4			
	Insufficient extent of comparison	Prescribed procedures for systematic counts	Inspect.	✓5	✓4			
Determining inventory costs	Inappropriate basis	Approved by controller	Inquire. Compare with accounting standards.			✓1, 2		✓1, 3
	Improper calculation	Consistent with engineering specification	Inspect.			✓1, 2		
			Re-perform.*			✓1, 2		
		Program controls	Use test data.*					

* Usually performed as part of dual-purpose tests.

Control risk assessment considerations

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Substantive Procedures for Inventories

- Except where perpetual records are used, the audit of inventories is based mainly on a substantive approach
- Emphasis is typically on existence and valuation as their IR of misstatement is always high

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Substantive Procedures for Inventories

- Typically the acceptable detection risk for these assertions is low with detection risk for other assertions is low to moderate
- A sample of possible substantive procedures included in an audit program can be found on the next few slides

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Audit Objectives: Property, Plant, and Equipment (1 of 4)

- Property, plant, and equipment are non-current tangible assets used in operations
- Key Issues: include ensuring that property, plant, and equipment actually exist, are owned, and are properly valued with adequate provision for depreciation
- An sample outline of relevant audit objective details can be found on the next few slides

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Audit Objectives: Property, Plant, and Equipment (2 of 4)

Transaction and Related Disclosure Objectives	
Occurrence (**OE**)	Recorded additions represent property, plant, and equipment acquired during the period under audit (**OE1**). Recorded disposals represent property, plant, and equipment sold or scrapped during the period under audit (**OE2**). Disclosed property, plant, and equipment transactions have occurred and pertain to the entity (**OE3**).
Completeness (**C**)	All additions that occurred during the period have been recorded (**C1**). All disposals that occurred during the period have been recorded (**C2**). Disclosures as to: • cost or valuation • depreciation methods and useful lives of each major class • pledging as collateral • the major terms of finance lease contracts of property, plant, and equipment assets are adequate (**C3**)
Accuracy (**AV**)	Additions are correctly journalized and posted (**AV1**). Disposals are correctly journalized and posted (**AV2**).

(continued)

Audit Objectives: Property, Plant, and Equipment (3 of 4)

Transaction and Related Disclosure Objectives	
	Property, plant, and equipment transactions are disclosed accurately and at appropriate amounts (**AV3**).
Cut-off (**CO**)	Additions and disposals of property, plant, and equipment before the period end are recorded in the current period and those after the period end are included in the next accounting period (**CO1**).
Classification (**D**)	Additions and disposals of property, plant, and equipment are recorded in the correct accounts (**D1**).
Presentation (**D**)	Property, plant and equipment transactions and events are appropriately aggregated or disaggregated, clearly described and the related disclosures are relevant and understandable (**D2**)

Audit Objectives: Property, Plant, and Equipment (4 of 4)

Account Balance and Related Disclosure Related Objectives	
Existence (**OE**)	Recorded property, plant, and equipment assets represent productive assets that are in use at the end of the reporting period (**OE4**).
Rights and obligations (**RO**)	The entity owns or has rights to all recorded property, plant, and equipment assets at the end of the reporting period (**RO1**).
Completeness (**C**)	Non-current asset balances include all applicable assets used in operations at the end of the reporting period (**C4**).
Valuation and allocation (**AV**)	Property, plant, and equipment are stated at cost or a valuation less accumulated depreciation (**AV4**).
Classification (**D**)	The details of additions and disposals of property, plant, and equipment support their classification in the financial statements (**D3**).
Presentation (**D**)	Property, plant and equipment are appropriately aggregated and disaggregated, clearly described and the related disclosures are relevant and understandable (**D4**)

Audit Strategy (1 of 3)

- Transactions relating to property, plant, and equipment are normally few and material therefore an assessment of control risk is rarely necessary
- Key source of evidence used is the fixed assets continuity schedule

Audit Strategy (2 of 3)

- Inherent risk assessments for assertions relating to property, plant, and equipment and the type of industry may have significant variations
- For example: inherent risk for existence may be low in a merchandising entity because the plant and equipment are not normally vulnerable to theft

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Audit Strategy (3 of 3)

- The inherent risk is affected by both the degree of difficulty estimating useful lives and residual values and the complexity of the depreciation methods used
- A capital assets sub-ledger is often maintained detailing the individual items including their costs, additions, alternations, and accumulated depreciation

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Substantive Procedures (1 of 3)

- Audit evidence must be obtained to establish the fairness of the opening balances and the ownership of the assets
- After that the auditor typically concentrates on the current year's transactions
- A sample of possible procedures for property, plant, and equipment appears on the next slide

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Substantive Procedures (2 of 3)

		Account Balance Audit Objective (from Table 11.5)				
Category	Substantive Procedure	OE4	C No.	RO1	AV No.	D No.
Initial procedures	1. Perform initial procedures on non-current asset balances and records that will be subjected to further testing. (a) Trace opening balances for plant assets and related accumulated depreciation accounts to and from the previous year's working papers. (b) Review activity in the general ledger, accumulated depreciation and depreciation expense accounts, and investigate entries that appear unusual in amount or source. (c) Obtain entity-prepared schedules of additions and disposals and determine that they accurately represent the underlying accounting records by: • adding and cross-adding the schedules and reconciling the totals with increases or decreases in the related general ledger balances during the period • testing the agreement of items on schedules with entries in related general ledger accounts	✓	✓3,4	✓	✓3	✓1
Analytical procedures	2. Perform analytical procedures. (a) Calculate ratios. (b) Analyze ratio results relative to expectations based on previous year's results, industry data, budgeted amounts, or other data.	✓	✓4		✓3	
Tests of details of transactions	3. Compare asset additions with supporting documentation.	✓	✓4	✓	✓3	✓1
	4. Compare asset disposals with supporting documentation.	✓	✓3,4	✓	✓3	
	5. Review repairs and maintenance and rental expense.		✓4			
Tests of details of balances	6. Examine title documents and contracts.	✓		✓		
	7. Review depreciation expense.				✓3	
	8. Consider the possibility of impairment.				✓3,4	
	9. Inquire into the valuation of property, plant, and equipment.				✓3,4	

Possible substantive procedures for property, plant, and equipment assertions

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Substantive Procedures (3 of 3)

Category	Substantive Procedure	Account Balance Audit Objective (from Table 11.5)				
		OE4	C No.	RO1	AV No.	D No.
Classification and Disclosure	10. Compare the statement presentation with applicable accounting standards. (a) Determine that property, plant, and equipment assets and related expenses, gains, and losses are properly identified and classified in the financial statements. (b) Determine the appropriateness of disclosures pertaining to the cost, value, depreciation methods, and useful lives of major classes of assets, the pledging of assets as collateral, and the terms of lease contracts.					✓1–4

Possible substantive procedures for property, plant, and equipment assertions

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Audit Procedures

- Calculation of ratios such as a comparison of the depreciation expense with the cost or written-down value
- Analysis of ratio results relative to expectations based on previous year's results, industry data, budgeted amounts or other data
  - *e.g., repairs and maintenance expense with that for previous years or with net sales*

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Tests of Details of Transactions

- These substantive procedures cover three types of transactions related to property, plant, and equipment:
  - additions
  - disposals
  - repairs and maintenance

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Substantiating Additions (1 of 4)

- The auditor needs first to ascertain management's policy with regard to the distinction between capital and expense expenditure (*most entities specify a cut-off value below which purchases are expensed, regardless of their nature)*

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Substantiating Additions (2 of 4)

- Auditor must ensure that additions are properly capitalized and that a consistent policy is followed
- The recorded amounts should be vouched to supporting documentation in the form of authorizations in the board minutes, suppliers' invoices, and contracts

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Substantiating Additions (3 of 4)

- The auditor should physically inspect major items, ensuring that details of the asset inspected (description and the manufacturer's serial number) agree with the documentation
- Also needs to inquire about leases for property, plant, and equipment entered into during the period

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Substantiating Additions (4 of 4)

- The auditor should review any lease agreements to determine their proper accounting
- The auditor should do some recalculations to verify the accuracy of the entity's determination of the present value of the lease liability

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Substantiating Disposals (1 of 3)

- Evidence of sales, disposals, and trade-ins should be available to the auditor in the form of cash remittance advices, written authorizations, and sales agreements
- Such documentation should be examined carefully to determine the accuracy of the accounting records, including the recognition of any gain or loss

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Substantiating Disposals (2 of 3)

- In determining whether all disposals have been recorded, the following procedures may be carried out:
  - analysis of the miscellaneous revenue account for proceeds from sales of property, plant, and equipment
  - investigation of the disposition of facilities associated with discontinued product lines and operations

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Substantiating Disposals (3 of 3)

- In determining whether all disposals have been recorded, the following procedures may be carried out (continued):
  - tracing of disposal authorizations to recording in the accounting records
  - reviewing insurance policies for termination or reductions of coverage
  - inquiring of management to ensure all disposals have been properly accounted for

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Tests of Details of Balances (1 of 5)

- The main tests of balances relate to valuation and disclosure
- These test the accumulated depreciation, the need for provision for impairment, and the appropriateness of any revaluation
- Also, the auditor may examine documentary evidence as to the existence and rights and obligations assertions of the recorded balance

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Tests of Details of Balances (2 of 5)

Audit procedures include:

- Examination of title documents and contracts
  - *e.g., the auditor may establish ownership of vehicles by examining registration certificates and insurance policies*
- Review of depreciation
  - *e.g., the auditor determines the reasonableness of accumulated depreciation by considering such factors as the remaining useful lives of existing assets*

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Tests of Details of Balances (3 of 5)

- The auditor must also determine whether the methods in use are consistent with those used in the preceding year
- The auditor verifies the accuracy of depreciation through recalculation
- *This is done on a selective basis by recalculating the depreciation on major assets and testing depreciation on additions and disposals during the year*

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Tests of Details of Balances (4 of 5)

Consideration of the possibility of impairment:

- The auditor needs to ensure that the carrying value of property, plant, and equipment does not exceed the greater of their realizable value or value in use
- *This is done in accordance with IAS 36 Impairment of Assets*

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Tests of Details of Balances (5 of 5)

Inquiry into the valuation of property, plant, and equipment:

- Management may choose to revalue property, plant, and equipment so as to reflect more fairly their value to the business
- *The auditor would need to be satisfied as to the skill, competence, objectivity, and independence of the valuator*

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