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Chapter 16 – Auditing the Production and Personnel Services Cycles
Chapter Overview

Auditing the Production and Personnel Service Cycles

Auditing the Production Cycle
- Audit Objectives
- Understanding the Entity and Its Environment
- Analytical Procedures
- Inherent Risk
- Consideration of Internal Controls
- Preliminary Audit Strategies
- Substantive Tests of Inventory

Auditing the Personnel Service Cycle
- Audit Objectives
- Understanding the Entity and Its Environment
- Analytical Procedures
- Inherent Risk
- Consideration of Internal Controls
- Preliminary Audit Strategies
- Substantive Tests of the Personnel Service Cycle

Others Services in the Production and Personnel Services Cycle
Figure 16-1  ■ Interface of Production Cycle with Other Cycles
Audit Objectives

Figure 16-2 ■ Selected Specific Audit Objectives for Inventory

<table>
<thead>
<tr>
<th>Specific Audit Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transaction Objectives</td>
</tr>
<tr>
<td><strong>Occurrence.</strong> Recorded manufacturing transactions represent material, labor, and overhead transferred to production and the movement to completed production to finished goods during the current period (EO1). Recorded cost of sales represent the sale of inventory during the year (EO2).</td>
</tr>
<tr>
<td><strong>Completeness.</strong> All manufacturing transactions (C1) and cost of sales (C2) that occurred during the period were recorded.</td>
</tr>
<tr>
<td><strong>Accuracy.</strong> Manufacturing transactions (VA1) and cost of sales (VA2) are accurately valued using GAAP and correctly journalized, summarized, and posted.</td>
</tr>
<tr>
<td><strong>Cutoff.</strong> All manufacturing transactions (EO1 and C1) and cost of sales (EO2 and C2) have been recorded in the correct accounting period.</td>
</tr>
<tr>
<td><strong>Classification.</strong> All manufacturing transactions (PD1) and cost of sales (PD2) have been recorded in the proper accounts.</td>
</tr>
</tbody>
</table>
Figure 16-3  Understanding an Entity’s Production Cycle

<table>
<thead>
<tr>
<th>Example Industry Traits</th>
<th>Developing a Knowledgeable Perspective about the Entity’s Financial Statements (Industry Median)</th>
<th>Assessing the Risk of Material Misstatement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mfg. of Construction Machinery and Equipment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Relative slow inventory turn.</td>
<td>Inventory as a % of total assets: 35%</td>
<td>• The existence of inventory is a significant risk.</td>
</tr>
<tr>
<td>• Significant fixed costs are involved in the manufacturing process.</td>
<td>Inventory Turn Days: 85 days</td>
<td>• Products are not subject to significant obsolescence risk.</td>
</tr>
<tr>
<td></td>
<td>Gross Margin: 28.7%</td>
<td></td>
</tr>
</tbody>
</table>
### Analytical Procedures

#### Figure 16-4  Analytical Procedures Commonly Used to Audit the Production Cycle

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Formula</th>
<th>Audit Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory Turn Days</td>
<td>Avg. Inventory Payable ÷ Cost of Good Sold × 365</td>
<td>Prior experience in inventory turn days combined with knowledge of cost of sales can be useful in estimating current inventory levels. A lengthening of the period may indicate existence problems.</td>
</tr>
<tr>
<td>Inventory Growth to Cost of Sales Growth</td>
<td>((Inventory(<em>n) ÷ Inventory(</em>{n-1}) – 1) ÷ ((Cost of Sales(<em>n) ÷ Cost of Sales(</em>{n-1}) – 1)</td>
<td>Ratios larger than 1.0 indicate that inventories are growing faster than sales. Large ratios may indicate possible inventory obsolescence problems.</td>
</tr>
<tr>
<td>Finished Goods Produced to Raw Material Used</td>
<td>Finished Goods Quantities ÷ Raw Material Quantities</td>
<td>Useful in estimating the efficiency of the manufacturing process. May be helpful in evaluating the reasonableness of production costs.</td>
</tr>
<tr>
<td>Finished Goods Produced to Direct Labor</td>
<td>Finished Goods Quantities ÷ Direct Labor Hours</td>
<td>Useful in estimating the efficiency of the manufacturing process. May be helpful in evaluating the reasonableness of production costs.</td>
</tr>
<tr>
<td>Product Defects per Million</td>
<td>Number of Product Defects as a Percent of Each Million Produced</td>
<td>Useful in estimating the effectiveness of the manufacturing process. May be helpful in evaluating the reasonableness of production costs and warranty expenses.</td>
</tr>
</tbody>
</table>
Inherent Risk

• Volume of transactions

• Cost issues

• Diversity of inventory items

• Storage at multiple locations

• Determination of quality and value

• Vulnerability of inventory

• Right of return and repurchase agreements
Consideration of Internal Controls – 
Common Documents and Records

• Production order

• Material requirements report

• Materials issue slip

• Time ticket

• Move ticket

• Daily production report
Consideration of Internal Controls – Common Documents and Records

- Completed production report
- Standard cost master file
- Raw materials inventory master file
- Work-in-progress inventory master file
- Finished goods inventory master file
Functions and Related Controls

• Initiating production
  – Planning and controlling production

• Production of Inventory
  – Issuing raw materials
  – Processing goods in production
  – Transferring completed work to finished goods
  – Protecting inventories
Functions and Related Controls

• Recording manufacturing and inventory transactions
  – Determining and recording manufacturing costs
  – Maintaining correctness of inventory balances

• Management Controls

• Additional Inventory Controls
Figure 16-5  System Flowchart—Manufacturing Transactions

**FUNCTIONS**
- Produce Inventory
  - Materials Issue Slip
    - Materials Move Tickets
      - Enter Data
      - Time Tickets
  - Enter Data

**Documentary Audit Trail**
- Production Order
- Enter Data

**Key Reports**
- Materials Requirement Report
- PRODUCTION MGMT: Information on Production and Materials Requirements

**Computer Program and Files**
- Production Data File
- Raw Material Master File
Systems Flowchart – Manufacturing Transactions

INVENTORY COSTING: Track and Record Inventory Units and Costs

- Exception Reports
- Daily Production Report
- Completed Production Report
- Variance Reports
- General Ledger

- Standard Cost File
- Raw Material Master File
- Work-In-Process Master File
- Finished Goods Master File
- G/L Master File
Inventory Audits

• Preliminary Audit Strategies

• Substantive Tests of Inventory
  – Initial Procedures
  – Analytical Procedures
Substantive Tests of Inventory

- Tests of Details of Transactions
  - Test Entries to Inventory Accounts
  - Test Cutoff of Purchases, Manufacturing, and Sales Transactions

- Tests of Details of Balances
  - Observation of the Client’s Physical Inventory Count
  - Timing and Extent of the Test
  - Inventory-Taking Plans
  - Performing the Test
Substantive Tests of Inventory

- Tests of Details of Balances
  - Inventories Determined by Statistical Sampling
  - Observation of Beginning Inventories
  - Test Clerical Accuracy of Inventory Listings
  - Test Inventory Pricing
  - Test Cost of Manufactured Inventories
Substantive Tests of Inventory

- Confirm Inventories at Locations Outside the Entity
  - Examine Consignment Agreements and Contracts

- Tests of Details of Accounting Estimates

- Comparison of Statement Presentation with GAAP
### The Personnel Services Cycle

**Figure 16-10** Key Transactions in the Personnel Services Cycle

<table>
<thead>
<tr>
<th>Debt</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation expense (including salaries, wages, commissions, bonuses, stock options and stock appreciation rights, and employee benefits)</td>
<td>Imprest payroll bank account (for net payroll)</td>
</tr>
<tr>
<td>Direct labor costs</td>
<td>Accrued benefits payable</td>
</tr>
<tr>
<td>Manufacturing labor (indirect labor costs)</td>
<td>Liabilities for amounts withheld from employees</td>
</tr>
<tr>
<td>Payroll tax expense</td>
<td>Accrued payroll taxes payable</td>
</tr>
</tbody>
</table>
### Audit Objectives

**Figure 16-11** Selected Specific Audit Objectives for the Personnel Services Cycle

<table>
<thead>
<tr>
<th>Specific Audit Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transaction Objectives</strong></td>
</tr>
<tr>
<td><strong>Occurrence.</strong> Recorded employee compensation, benefits, and payroll tax expenses relate to compensation for services rendered during the year (EO1).</td>
</tr>
<tr>
<td><strong>Completeness.</strong> Recorded employee compensation, benefits, and tax expenses include all such expenses incurred for personnel services during the year (C1).</td>
</tr>
<tr>
<td><strong>Accuracy.</strong> Employee compensation, benefits, and payroll tax expenses are accurately computed and recorded (VA1).</td>
</tr>
<tr>
<td><strong>Cutoff.</strong> Employee compensation, benefits, and payroll tax expenses have been recorded in the correct accounting period (EO1 and C1).</td>
</tr>
<tr>
<td><strong>Classification.</strong> Employee compensation, benefits, and payroll tax expenses are properly identified and classified in the income statement (PD1).</td>
</tr>
</tbody>
</table>
The Personnel Services Cycle

• Understanding the Entity and Environment

• Analytical Procedures

• Inherent Risk
<table>
<thead>
<tr>
<th>Ratio</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Average payroll cost per employee classification</td>
<td>Total payroll costs for an employee group divided by the number of employees in the group</td>
<td>Reasonableness test of gross payroll for a group of employees. Many companies have more than one class of employee, and it is important to evaluate the reasonableness of payroll based on employee class.</td>
</tr>
<tr>
<td>Revenue per employee</td>
<td>Total revenue ÷ the number of full-time employees.</td>
<td>This may be a measure of productivity per employee. This is particularly important in services industries and would be compared with industry statistics.</td>
</tr>
<tr>
<td>Total payroll costs as a percentage of revenues</td>
<td>Total payroll expenses ÷ total revenues</td>
<td>Reasonableness test of payroll costs. This is often compared with industry statistics.</td>
</tr>
<tr>
<td>Payroll tax expense as a percentage of gross payroll</td>
<td>Total payroll tax expenses ÷ gross payroll</td>
<td>Reasonableness test of payroll taxes. This can often be compared with standard tax rates.</td>
</tr>
</tbody>
</table>
Consideration of Internal Controls – Common Documents and Records

- Personnel authorization
- Clock card
- Time ticket
- Payroll register
- Imprest payroll bank account
- Payroll check
Consideration of Internal Controls – Common Documents and Records

• Labor cost distribution summary

• Payroll tax returns

• Employee personnel file

• Personnel data master file

• Employee earnings master file
Functions and Related Controls

• Initiating payroll transactions
  – Hiring employees
  – Authorizing payroll changes

• Receipt of services
  – Preparing attendance and timekeeping data
Functions and Related Controls

• Recording and paying payroll transactions
  – Preparing the payroll
  – Recording the payroll

• Paying payroll
  – Paying the payroll
  – Protecting unclaimed wages
  – Filing payroll tax returns
Systems Flowchart – Payroll Transactions

**Figure 16-13**  System Flowchart—Payroll Transactions

- **Documentary Audit Trail**
  - Personnel Authorization Form
  - Enter Personnel Data

- **Key Reports**
  - Report of Master File Changes
  - PERSONNEL PROGRAM: Controls changes to personnel data master file

- **Computer Program and Files**
  - Personnel Data Master File

- **Initiate Payroll Transactions**
- **Receive Service**
- **Electronic Time Card**
  - Supervisory Review and Approval
Systems Flowchart – Payroll Transactions

PAYROLL PROGRAM and MASTERS FILE UPDATE: Calculate payroll based on time and master file information, update master files and G/L, print reports and paychecks

- Payroll Register
- General Ledger
- Exception Reports
- Labor Cost Distribution Summary
- Payroll Tax Returns
- Paycheck
- Personnel Data Master File
- Employee Earnings Master File
- G/L Master File
Personnel Services Audits

• Preliminary Audit Strategies

• Substantive Tests of Personnel Services
  – Initial Procedures
  – Analytical Procedures
Substantive Tests of Personnel Services

• Tests of Details of Transactions
  – Test Entries to Inventory Accounts
  – Test Cutoff of Personnel Services Transactions

• Tests of Details of Balances and Disclosures
  – Recalculate Accrued Payroll Liabilities
  – Auditing Employee Benefits and Pension Plans
  – Auditing Stock Options and Stock Appreciation Rights