CHAPTER 10
PLANT ASSETS, NATURAL RESOURCES AND INTANGIBLES

Chapter Outline | **Notes**

I. **Plant Assets—**Tangible assets used in a company's operations that have a useful life of more than one accounting period. Consistent with cost principle, recorded at cost. Cost includes all normal and reasonable expenditures necessary to get the asset in place and ready for its intended use.

A. Land
Cost includes purchase price, real estate commissions, title insurance, legal fees, accrued property taxes, legal fees, title insurance fees, accrued property taxes, surveying, clearing, landscaping, and local government assessments (current or future) for streets, sewers, etc. Also includes cost of removal of any existing structures (less proceeds from sale of salvaged material). Land cost is not allocated to expense if it has an indefinite life.

B. Land Improvements
Costs that increase the usefulness of the land.
1. Examples: parking lot surfaces, driveways, fences, and lighting systems (all have limited useful lives).
2. Costs are charged to a separate Land Improvement account.
3. Costs are allocated to the periods they benefit (depreciated).

C. Buildings
1. If purchased, cost usually includes its purchase price, brokerage fees, taxes, title fees, attorney costs, and all expenditures to make it ready for its intended use (any necessary repairs or renovations such as wiring, lighting, flooring and wall coverings).
2. If constructed for own use, cost includes materials and labor plus a reasonable amount of indirect overhead cost (heat, lighting, power, and depreciation on machinery used to construct the asset). Cost also includes design fees, building permits, and insurance during construction.

D. Machinery and Equipment
Costs include all normal and necessary expenditures to purchase them and prepare them for their intended use (purchase price, taxes, transportation charges, insurance while in transit, and the installing, assembling and testing of machinery and equipment).

E. Lump-Sum Purchase
A group of plant assets purchased with a single transaction for a lump-sum price. Individual asset cost is determined by allocating the cost of the purchase among the different types of assets

acquired based on their *relative market values.*

II. **Depreciation**—The process of allocating the cost of a plant asset to expense in the accounting periods benefiting from its use. Recorded as a debit to Depreciation Expense and a credit to Accumulated Depreciation.

A. Factors in Computing Depreciation

1. Cost—described in section I above.
2. Salvage value—(*residual value* or *scrap value*) an estimate of the asset's value at the end of its benefit period.
3. Useful life—(*service life*) length of time the asset is expected to be productively used in a company's operations. Factors affecting useful life include:
   a. *Inadequacy—*the insufficient capacity of plant assets to meet the company's growing productive demands.
   b. *Obsolescence*—refers to a plant asset that is no longer useful in producing goods or services with a competitive advantage because of new inventions and improvements.

B. Depreciation Methods

1. Straight-line method—charges the same amount to expense for each period of the asset's useful life. Method used by most companies.
   Computation: Cost minus salvage value (equals the *depreciable cost)* divided by the number of accounting periods in the asset's useful life equals the periodic depreciation.
2. Units-of-production method—charges a varying amount of cost to expense for each period of an asset's useful life depending on its usage. Examples of capacity measurements: miles driven, product outputs, hours used. *Computation:*
   a. Cost minus salvage value divided by the total number of units expected to be produced during assets useful life equals the *depreciation per unit.*
   b. Depreciation per unit is multiplied by number of units consumed in the period equals the period's depreciation.
3. Declining-balance method—an accelerated depreciation method which yields larger depreciation expenses during the early years of an asset's life and smaller charges in later years. *Computation:* Multiply the asset's beginning of period book value by a depreciation rate (usually twice the straight-line rate) to determine the period's depreciation. If double the straight-line rate is used the method is referred to as *double declining-balance.* (Note that salvage value *is not used* in the calculation.)

C. Partial Year Depreciation
When an asset is purchased (or disposed of) at a time other than the beginning or end of an accounting period, depreciation is recorded for part of the year.

D. Revising Depreciation

If estimated salvage and/or useful life is revised:

1. Depreciation expense computations are revised by spreading the remaining cost to be depreciated over the revised useful life remaining.
2. The revision is referred to as a *change in an accounting estimate* and is reflected in current and future financial statements, not prior statements.

E. Reporting Depreciation

1. Cost of plant assets and accumulated depreciation are reported on the balance sheet or in its notes.
2. To satisfy the fulldisclosure principle, the depreciation method or methods used must be disclosed in a balance sheet note.
3. Plant assets are reported at their undepreciated costs (book value), not at market value. (basis is going-concern assumption) Exception: Impairments (permanent decline in market) allow asset write-downs to market.
4. Accumulated depreciation on the balance sheet does not represent funds accumulated to buy new assets when the presently owned assets must be replaced.

III. Additional Expenditures—Those made to operate, maintain, repair, or improve plant assets after their initial purchase. To record these expenditures one must decide whether to capitalize (increase and asset) or expense in current period.

A. Ordinary Repairs—expenditures to keep an asset in normal, good operating condition. They do not materially increase the asset's life or productive capabilities.

1. Treated as *revenue expenditures* (also called *income statement expenditures*). Recorded as expenses on current period's income statement.
2. Examples: cleaning, repainting, and lubricating.

B. Betterments (Improvements) and Extraordinary Repairs—expenditures to make a plant asset more efficient or productive; both are treated as a capital expenditure.

1. *Betterments* often involves adding a component to an asset that does not always extend its useful life.
   a. Examples: adding a wing to a building or changing a machine from manual function to automatic.
   b. Debited to the asset account.
   c. The increase in asset’s book value results in need to revise future depreciation.
2. *Extraordinary repairs* are expenditures that do extend the asset's useful life beyond its original estimate.
   a. Examples: roofing replacement and major overhauls of machinery and equipment.
   b. Treated as capital expenditures (debited to asset account) because they benefit future periods.

IV. **Disposals of Plant Assets**—Assets may be *discarded, sold, or exchanged* due to wear and tear, obsolescence, inadequacy, or damage by fire or other accident. General accounting steps in a disposal of a plant asset:

- Record depreciation up to the date of disposal—this also updates Accumulated Depreciation.
- Remove account balances of the disposed asset—including its Accumulated Depreciation.
- Record any cash (and/or other assets) received or paid in the disposal.
- Record any gain or loss resulting from comparing the asset's book value with the market value of any assets received. *Exception:* in the case of an exchange that lacks commercial substance—discussed in Appendix 10[A].

A. Discarding Plant Assets—no longer useful and has no market value
   Follow general accounting steps above.
   1. If fully depreciated, no loss.
   2. If not fully depreciated, record loss equal to the book value.

B. Selling Plant Assets
   Follow general accounting steps above.
   1. Sale is at a gain if value received exceeds book value.
   2. Sale is at a loss if value received is less than book value.

VI. **Intangible Assets**—Certain nonphysical assets (used in operations) that confer on owners long-term rights, privileges, competitive advantages. Examples in B below.

A. Cost Determination and Amortization
   1. Recorded at cost when *purchased*. If simply developed by the business, relative immaterial costs are expensed.
   2. *Amortization*—process of systematically allocating cost of intangible asset to expense over its estimated useful or economic life. (If it has an indefinite useful life, it should not be amortized but is tested annually for impairment—this test is discussed in advanced course)

B. Types of Intangibles
   1. *Patent*—an exclusive right granted to its owner to produce and sell a patented item or to use a process for 20 years.
   2. *Copyright*—the exclusive right to publish and sell a musical, literary, or artistic work during the life of the creator plus 70 years.
   3. *Franchises and Licenses*—rights that a company or government grants an entity to deliver a product or service under specified conditions. If agreement is for indefinite or perpetual period, costs are not amortized.
   4. *Trademarks and Trade Names*—symbols, names, phrases, or jingles identified with a company, product, or service.

5. *Goodwill—specific meaning in accounting*: the amount by which the value of a company exceeds the value of its individual assets and liabilities. Implies the company as a whole has certain valuable attributes not measured among its individual assets and liabilities. Goodwill is measured as the excess of cost of an acquired entity over the valuable of net assets acquired. It is not amortized but is tested annually for impairment.
6. *Leasehold*—the rights to possess and use leased property granted by the property's owner (lessor) to the lessee in a contract called a lease. Recorded, if there was a cost involved, as an intangible asset by the lessee (or sublessee). As Leaseholds are amortized, the cost is charged to Rent Expense.
7. *Leasehold improvements*—alterations or improvements to leased property, such as partitions, painting, and storefronts. Amortization results in debit to Amortization Expense—Leasehold Improvements.