CHAPTER 15

COST ACCOUNTING

1. INTRODUCTION

a. **Purpose.** This chapter presents the policy to be followed by the Department of Energy (DOE) and its site/facility management contractors (contractors) in developing and operating a product or standard cost accounting system for: (1) the procurement and production of nuclear material, weapons components and any other products manufactured/assembled by the Department; (2) stockpiled weapons, weapons components, and intermediate weapons products; and (3) weapons components delivered to the Department of Defense (DOD). Excluded from the production cost accounting system are any of the above mentioned materials withdrawn from the production chain for use in research, process development, pilot plant operations and weapons design, development and test activities, and the dismantlement/disassembly of weapons, weapon components, and weapon systems. This chapter prescribes the procedures for transferring accumulated costs of materials and weapons components to field offices and contractors receiving materials for further processing and assembly, and for transferring any nuclear material in other inventories. The chapter also addresses other cost accounting topics with applicability to DOE entities.

b. **Background.** DOE's cost accounting practices were promulgated in the DOE Accounting Practices and Procedures Handbook (APPH), dated October 1979, Chapter X, Product Cost Accounting. That chapter was last revised in December 1983. In the interim, DOE production facilities have been working with the Cost Accounting Standards (CAS), the APPH Chapter X, and locally developed supplements. The Department's decision to resume tritium production requires formal guidance on cost accounting, and the introduction of this chapter.

c. **Applicability.** The applicability of this chapter is specified in Chapter 1, “Accounting Overview”, Note that the applicability of this chapter pertains almost exclusively to costs incurred by site/facility management contractors, with little applicability to costs incurred within Departmental elements. Those costs are addressed in the paragraph concerning Managerial Cost Accounting.

2. ELEMENTS OF PRODUCT COST.

The costs listed below are elements of finished products and/or components.

a. **Direct Material.** The cost of all materials and stores received in a production area for fabrication or assembly into final products or components. This includes raw materials, including nuclear materials and their transportation costs and other costs incurred in moving the materials to the production facility, feed materials transferred to a production process, process materials, and any other materials or stores received in a production area for fabrication or assembly into a final product or component.

b. Direct Labor. The cost of labor employed in the operation of a production process, or in the fabrication or assembly of weapons, weapon components or other products. For labor cost to be classified as direct, it must be possible to measure the cost applicable to each unit of product or job.

c. Other Direct Costs. Elements of cost such as travel directly related to the product, specialized training, subcontract costs, and service charges such as utilities if directly metered.

d. Indirect Costs. The cost of all production support and superintendence, including depreciation applicable to a production process or facility. A proper allocation of the contractor's indirect costs typically allocated to all cost objectives at a particular site, such as General and Administrative (G&A) expenses, should be included in the product cost. DOE costs, if they are directly identifiable with and chargeable to production (such as warehousing and inspection costs, or increased security costs specifically identified with weapons production) should be included.

e. Other Costs. Certain costs may be categorized as either direct or as indirect costs depending upon the specific circumstances. An example would be special tooling, the cost for tooling to fabricate or assemble unique weapons or weapons components. If specific to one component or weapons system then the cost should be treated as direct, but if fabricated for a production process including multiple weapons systems or components, the cost should be treated as an indirect cost with appropriate allocations.

f. Life Extension Program. The Stockpile Life Extension Program consists of activities which enable the nuclear weapons complex to extend the operational lives of the weapons in the stockpile well beyond their original design lives. Phase 6.X (the weapon's acquisition life-cycle process which encompasses the refurbishment of existing weapon systems) cost associated with the First Delivery Unit (FDU) should be capitalized into the value of the specific weapons systems refurbishment, specifically the costs incurred in Phase 6.4 (Production Engineering) that support the purchase, procurement and fabrication of the physical infrastructure for the FDU through Phase 6.5 (First Production).

3. EXCLUSIONS FROM PRODUCT COST

a. Research and Development. 'The cost of basic Research and Development (R&D) activities performed under the operating activities of DOE, and the cost of engineering and design of weapons components and production processes for weapons and components. It includes preproduction, pilot production, and process/product engineering costs. The R&D process ends with the first production unit (prototype), and production begins with the first delivery unit. For that reason, first delivery unit costs are included in product cost.

b. **Standby Costs.** The costs incurred in conditioning production facilities for placement in standby status and maintaining these facilities in a shutdown mode for possible future use. Costs include such items as guard force activities, fire protection, electricity, heating and general maintenance as well as a proper share of the contractor's G&A expenses. Standby costs are distinct from excess capacity costs where production is occurring but at a capacity less than normal or other level of capacity.

c. **Excess Capacity Costs.** All costs that can be identified to the maintenance of an excess capacity at the production facility should be excluded from the product cost. This includes a situation where the deliberate sizing of the production facility is based upon projected levels of production over the short term in addition to the maintenance of capability for increased production should the need arise in the short or long terms. The costs incurred as a result of such deliberate plant/production facility sizing are costs that are more appropriately accounted for as period costs rather than production costs. The National Nuclear Security Administration (NNSA) has identified such costs and developed a program, Readiness in Technical Base and Facilities (RTBF), to better manage these facility operations costs where such non-production costs can be budgeted, managed, and reported. Effective in FY 2001, the department began recognizing RTBF as a final cost objective or responsibility segment (See Paragraph 9.b.). Additionally, costs incurred that can be attributed to the existence of plant capacity, inherent to the original construction of the facility, that is excess to the current production requirements should also be excluded from the product costs. Whatever the reason for the existence of the excess capacity, the costs attributed to it should be supported by either historical cost data from a period of operation at what could be considered full or normal capacity or an engineering determination of practical capacity. Excess capacity costs (RTBF and other excess capacity costs) should be treated as period costs and should not be included in the cost of the product.

d. **DOE Costs.** The cost of DOE program management and support, such as program direction, landlord costs, and Departmental Administration, should normally be excluded from product cost. The cost associated with DOE personnel should be included only if it can be specifically identified with the product or production process.

e. **Startup Costs.** All costs associated with operational testing, training of operating staffs, and similar expenses involved in preparations for production operations of new facilities or reactivated standby facilities.

f. **Transportation and Security Shipment Costs Applicable to Stockpile Transactions.** Costs of transporting weapons parts, components and assemblies to and from stockpile, such as freight charges, salaries, and travel expenses of guards, etc., are excluded from product costs and are charged to the appropriate DOE program. The cost of preparing completed items for shipment to stockpile by a contractor is charged to product cost.

g. **Costs Incurred Through Conversion of Weapons.** The costs of maintenance, modifications, repairs, retrofit and other support of nuclear weapons stockpile that are not part of the Life Extension Program are excluded from product cost and charged to the applicable stockpile maintenance activities.

h. **Inventory Adjustments and Revaluations.** Inventory adjustments or revaluations not of a recurring nature which have been specifically authorized by the DOE CFO are excluded from product costs.

i. **Conversion of Waste Materials to Weapons Use.** This includes costs associated with the processing, conversion, segregation, and filtering of waste materials and the packaging, transportation, decontamination, and storage costs related to waste management recycling activities.

4. **TRANSFER PRICES.** Inventory/work-in-process moved within the production process as part of a production schedule is to be transferred at a value that includes all costs incurred to date in the process, direct costs and indirect costs allocated to the product/component, including any capitalized costs. This transfer price, in addition to being the carrying value for the DOE inventory, will be picked up as the value of the direct material at the next DOE site in the production process. That site within the process will apply additional direct material, direct labor and indirect allocations to the cost of the product or component. This process will occur within each step in the production complex. Nuclear materials will be transferred at standard transfer value costs set by the Office of Financial Policy, DOE Headquarters.

5. **PRICING.** The contents of this chapter are intended to provide guidance in calculating the cost of DOE products. Product cost is only one element of the price charged to outside entities. The general requirement for pricing of goods and services sold by DOE to outside entities is for full cost recovery and is governed by DOE Order 522.1, Pricing of Departmental Materials and Services.

6. **STANDARD COSTING.** For those production facilities that use standard costing, establishing the standard cost factors requires the development by the contractor of engineered standards in terms of material, labor, and predetermined overhead for all sub-parts, sub-assemblies, and assemblies. Details for the development of engineered standards are site specific and therefore are not prescribed in this handbook. The standard cost should include the normal amount of material at its inventory valuation (purchased material or the standard of the items in production), the required labor time and anticipated wage rates for each different operation, and a prorated amount of overhead/indirect costs. Standard cost variances will normally remain in production inventory through the fiscal year, but should be charged to cost of operations at fiscal

year end. An analysis of standard cost variances should be performed and used in establishing standard costs for the subsequent year. Standard costs should normally be adjusted only at the beginning of the fiscal year; however, contractors may adjust the standards on a more frequent basis depending on the changes being made and the materiality of the changes.

7. **CONSTRUCTION.** Capital construction projects should be treated as other final cost objectives for purposes of cost allocation as delineated in Chapter 10, Paragraph 1. f.(a)(e) of the Accounting Handbook. Allocation rates should be the same for operating and construction projects unless there are cost centers/costs that are material and do not have a causal/beneficial relationship to construction projects. When construction is performed by DOE (in-house), DOE G&A will not be included in the capitalized cost.

8. **OTHER COST ACCOUNTING CONCEPTS/PRINCIPLES.** There are several other cost accounting concepts and/or principles with applicability to DOE.

   a. **Functional Cost.** The Department's Support Cost by Functional Activity (SCFA) tracks the support related costs incurred by the DOE's largest site/facility management contractors. The Department has developed consistent functions for approximately 20 specific cost categories such as "facility management," "site maintenance," and "human resources" that contractors use in reporting their support related costs. These specific categories fall into three broad categories: "general support," "mission support," and "site specific support." These costs are summarized in the annual SCFA Report.

   b. **Activity Based Costing (ABC).** Activity Based Costing is a method for developing cost estimates using cost accounting principles. A project is subdivided into discrete, quantifiable activities or work units. After the project is broken into its activities, a cost estimate is prepared for each activity. A detailed explanation of ABC can be found in Chapter 24 of DOE Guide 430.1-1.

   c. **Cost Accounting Standards.** The CAS were established to ensure that the accounting practices of contractors performing work on both commercial and Government contracts were consistently applied and that costs were equitably allocated. The CAS has been recodified by the Cost Accounting Standards Board and is contained in 48 Code of Federal Regulations, Chapter 99. The Department's site/facility management contracts are generally subject to CAS, although specific situations may exist with certain contracts which render portions of the CAS inapplicable. Contractors should maintain a costing methodology that allocates cost in accordance with contractually-required and DOE approved, Cost Accounting Standards Disclosure Statements.

9. MANAGERIAL COST ACCOUNTING

a. **Background.** In June 1995, the Office of Management and Budget (OMB) issued Statements of Federal Financial Accounting Standards (SFFAS) Number 4, Managerial Cost Accounting Concepts and Standards for the Federal Government. The intent of SFFAS Number 4 was to provide reliable and timely information on the full cost of Federal programs, their activities and outputs, and to require the reporting of this information in annual financial statements. The Standard was initially scheduled to become effective October 1, 1996, for Fiscal Year (FY) 1997 financial statements. OMB later deferred mandatory implementation of the standard until FY 1998. Because the Department was well into the implementation process at the time of the OMB deferral, the FY 1997 financial statements were compiled in accordance with the standards. The Department's annual financial statements have been compiled in accordance with SFFAS Number 4 each year since FY 1997.

b. **General Goals/Program Goals.** Working with the program offices, the Office of the Chief Financial Officer (CFO) developed a series of responsibility segments for the Department's financial statements. These responsibility segments (the terminology used in SFFAS Number 4) represented the Departmental components responsible for carrying out a mission, conducting a major line of activity, or producing products and services. In cost accounting terminology, the responsibility segments would be identified as final cost objectives. However, not all responsibility segments were final cost objectives. Responsibility segments were also developed for those costs that are ultimately allocated to other responsibility segments. This includes such indirect costs as program direction, landlord activities, departmental administration, etc. The net costs for each final cost objective responsibility segment were reported in the Notes to the Financial Statements section of the annual Accountability Report. In FY 2003, the Department began using the terms general goals and program goals in lieu of responsibility segments. In addition to the current year net costs for each goal, the prior year net costs are also reported for comparability purposes.

c. **Data Input.** The majority of the Department's cost data is input into the financial system by the Headquarters CFO and the contractors. The contractors input cost data against the final cost objective goals as the costs are incurred during the year. Although the costs incurred by the contractor include both direct and indirect costs, for purposes of the managerial cost accounting, contractor costs are treated as direct costs. To clarify, the contractor incurs direct costs against the DOE program on which it is performing the contractual work. It also allocates its own indirect costs at that site to the various DOE programs (final cost objectives) at the site in accordance with the CAS. These are all recorded as Direct Funded Expenses in the DOE financial system. The Headquarters CFO periodically updates the financial database with all data input since the last update. Current information and corresponding financial reports are available on-line to program managers and field organizations the next day. Quarterly, various indirect costs are allocated to the final cost objective goals. Effective in FY 2003, responsibility for performing cost allocations was transferred from the field CFO's or equivalent to Headquarters. This change was made necessary by the accelerated time frames for completion of the financial statements. The allocations are made on the same basis as used by the field sites in previous years. The field CFO's or equivalent are responsible for informing Headquarters CFO of any changes at the site which would necessitate changes in allocation methodology.

d. Cost Allocation Methodology. Goals which do not represent final cost objectives must be fully allocated to the goals which do represent final cost objectives. This includes such cost elements as departmental administration, program direction for program offices with multiple program goals, landlord costs, security investigations, etc. These allocations are now performed by the Headquarters CFO with input from program offices and field CFOs or equivalent. To achieve a reasonable level of consistency throughout the Department, establishment and application of allocation rates, based on total program funded costs, has been the preferred methodology for allocating these indirect costs to goals, provided it results in an equitable assignment of these costs. Field CFO's or equivalent are responsible for advising the Headquarters CFO if the allocation methodology used in previous years is no longer appropriate and, if a methodology other than one based on total funded program costs is recommended, the rationale supporting it. It is imperative that the allocation methodology selected be reasonable and well documented.

e. Update Process. Goals are reviewed and updated by Headquarters CFO each year. The assignment of new programs/accounting classifications to goals is coordinated with the responsible program office. Deletion of any old accounting classification from the listing is coordinated at the same time, and the program office may also decide to recommend changes to their goals and/or accounting classification assignments. A crosswalk of the general and program goals to the accounting classification associated with their programs is maintained by the Headquarters CFO and is updated each year. Guidance memoranda are issued to the field and to Headquarters program offices as needed.

f. Post Retirement Benefits. SFFAS Number 4 requires that the full cost of goods and services received from other Government entities be included in the Department's financial statements. The retirement benefits paid by the Office of Personnel Management (OPM) are one of those costs. To assist in accounting for post retirement benefits for Federal retirees, OPM issued Financial Management Letter Number 97-08, Cost Factors for Pension and Other Retirement Benefits, on October 23, 1997. The letter included cost factors to be applied to the current pay of regular Civil Service Retirement System and Federal Employees Retirement System employees. Additional cost factors provided were an amount for each employee enrolled in the Federal Employees Health Benefits Program and a percentage of basic pay for each employee enrolled in the Federal Employees

Group Life Insurance Program. OPM provides updated cost factors quarterly and at the end of the fiscal year. Headquarters CFO calculates the imputed pension and post retirement benefits costs by applying the annual cost factors to the actual cost data maintained in the payroll system. The costs are accumulated by first tier organization and Headquarters CFO enters the imputed costs into the financial system and performs the allocations except for the Power Marketing Administrations (PMAs). Headquarters CFO provides the OPM imputed costs to the PMAs who make the necessary entry into the financial system. The allocations are almost always proportional to the allocations of program direction costs.

g. **Fiscal Year-End Process.** All final cost data for the expiring fiscal year, including data for the contractors, must be entered into the financial system before final allocations can be performed. After receipt of all final field September submissions, Headquarters CFO will perform the final managerial costs allocations. Guidance is issued annually by Headquarters CFO detailing end-of-year requirements, including changes in schedules.

h. **Restatement of Prior Year Costs.** As previously stated in paragraph 9b, the presentation of the financial statements shows both the current fiscal year costs and the prior year costs. For purposes of comparability, the prior year costs may need to be restated if there has been a significant change in the program structure. Field CFOs or equivalent should advise Headquarters if circumstances at their sites necessitate a restatement of the prior year's costs.