Department of Energy
Washington, DC 20585

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MEMORANDUM FOR DISTRIBUTION

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AND CONSTRUCTION MANAGEMENT/ME-90

SUBJECT: FY 2004 Real Property Deferred and Annual Maintenance Reporting

Pursuant to section 5.d.12 of DOE Order O 30.1B "Real Property Asset Management" (RPAM), this memorandum provides implementing guidance for the FY 2004 deferred and annual maintenance reporting requirements. Please distribute it to the appropriate elements of your organization.

Although FY 2004 marks the first year of RPAM implementation, it will be the seventh year of data collection and reporting of deferred, required and actual maintenance within the Department of Energy's consolidated financial statements. By utilizing this data in the Facility Information Managements System (FIMS), the Department has the ability, both corporately and at a site level, to track maintenance expenditures and analyze various funding scenarios and their potential impacts on the physical plant.

The attached *Implementation Procedures to Report Deferred and Annual Maintenance on Real Property* addresses only real property (i.e., buildings, including installed equipment, and other structures and facilities). The guidance provides the implementation procedures for the field offices/sites to determine and report deferred and annual maintenance on real property and provides the framework for consistent department-wide determination and reporting of deferred and annual maintenance.

If your staff have any questions, please have them contact Peter O'Konski at (202) 586-4502 for maintenance issues or Andrew Duran at (202) 586-4548 for FIMS reporting issues.

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Attachment 1

Implementation Procedures to Report Deferred and Annual Maintenance On Real Property

1) The following is the FY 2004 implementation procedures for the field offices/sites to determine and report deferred maintenance on real property as required by the Statement of Federal Financial Accounting Standards (SFFAS) No. 6, Accounting for Property, Plant, and Equipment (PP&E) and DOE Order 430.1B, Real Property Asset Management (RPAM).

   a) This document is intended to assist field offices/sites in consistently and accurately applying the appropriate methods to determine and report deferred maintenance estimates as well as reporting of annual required and actual maintenance costs.

2) Definitions[1,2]

   a) Annual Actual Maintenance Costs. The actual, burdened costs incurred in FY 2004 of all maintenance activities for a building or OSF (including repairs and those activities accomplished in FY 2004 that were identified in the FY 2003 deferred maintenance estimate). Do not include maintenance costs of programmatic equipment and programmatic real property.

      i) Programs executing a directed deferred maintenance reduction program; such as the NNSA Facilities and Infrastructure Recapitalization Program (FIRP), are encouraged to separately track costs associated with deferred maintenance reduction for cost visibility and as a tool to measure program effectiveness.

   b) Annual Required Maintenance Costs. Estimates of all costs to perform maintenance activities for a building or other structure and facility (OSF) in FY 2004 that one would normally expect to be accomplished as determined by engineering/maintenance/life cycle analysis and vendor maintenance schedule. Included are preventive maintenance, predictive maintenance, corrective maintenance and any other maintenance / repair activity required for which FY 2004 is the optimum period of accomplishment. Maintenance costs should, in as much as practical, reflect the anticipated cost of the maintenance action. I.e., they should reflect the local prevailing wage rates and cost burdens as well as other related work necessary to resolve the deficiency. For example, if replacement of a compressor installed on a chiller would require a crane lift and relocation of a chilled water line, those costs should be included in the deficiency cost. Similarly, where maintenance efforts can be aggregated in project bundles thereby reducing the cost; that reduced cost should be captured. As an example, aggregating all paving into a large indefinite quantity paving contract typically offers significant savings over discrete actions through multiple paving contracts. Maintenance costs of programmatic equipment and programmatic real property are not to be included. However, an average historic cost, anticipated for corrective maintenance should be reported in this category. Do not include maintenance requirements that were identified in the FY 2003 deferred maintenance estimate (unless they are reprogrammed for accomplishment in FY 2004 and are not going to be deferred to FY 2005).

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[1] Reference: *FIMS Reporting Guide*

[2] Reference: DOE O 430.1B *Real Property Asset Management*

i) Programs executing a directed deferred maintenance reduction program; such as the NNSA Facilities and Infrastructure Recapitalization Program (FIRP), are encouraged to separately fund deferred maintenance reduction. Separate funding establishes cost visibility and generates a deferred maintenance target from which to measure program effectiveness.

c) Betterments. Capitalized improvements to facilities that result in better quality work, increased capacity, and/or extended useful life as required to accommodate regulatory and other changes to requirements. Determining when and to what extent expenditure should be treated as betterment requires judgment. The proper basis for determining whether or not betterment is effected is when the effect of the replacement is related to each unit when a minor item is replaced in each of a number of similar units, rather than to the cumulative costs. Listed below are the various terms that are commonly used to describe various categories of betterments.

i) Construction is the erection, installation, or assembly of a new plant facility; the addition, expansion, improvement, or replacement of an existing facility; or the relocation of a facility. Construction includes equipment installed in and made part of the facility and related site preparation; excavation, filling and landscaping, or other land improvements; and design of the facility. Examples of improvements to an existing facility include the following types of work.

(1) Replacing standard walls with fireproof walls.

(2) Installing a fire sprinkler system in a space that was previously not protected with a sprinkler system.

(3) Replacing utility system components with a significantly larger capacity components (e.g., replacing a 200-ton chiller with a 300-ton chiller) and converting the functional purpose of a room (e.g., converting an office into a computer room).

ii) Conversion is a major structural revision of a facility that changes the functional purpose for which the facility was originally designed or used.

iii) Major Renovation and Replacement is a complete reconstruction of a facility that has deteriorated or has been damaged beyond the point where its individual parts can be economically repaired. If the item replaced is a retirement unit, its original costs (including installation cost) are removed from the plant and capital equipment accounts, and the cost of the newly installed item (including installation cost) is added to the plant and capital equipment accounts.

d) Corrective Maintenance. The repair or restoration of failed or malfunctioning equipment, systems, or facilities to their intended functions or design conditions. It does not result in a significant extension of the expected useful life.

e) Deferred Maintenance. Maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period.

f) Facility. Land, buildings, and other structures, their functional systems and equipment, and other

fixed systems and equipment installed therein, including site development features outside the plant, such as landscaping, roads, walks, parking areas, outside lighting and communication systems, central utility plants, utilities supply and distribution systems, and other physical plant features. These include any of the DOE-owned, -leased, or -controlled facilities, and they may or may not be furnished to a contractor under a contract with DOE.

g) Infrastructure. All real property, installed equipment, and related real property that is not solely supporting a single program mission at a multi-program site or that is not programmatic real property at a single program site.

h) Maintenance. Day to day work that is required to sustain property in a condition suitable for it to be used for its designated purposes, including preventive, predictive, and corrective maintenance. Maintenance costs and work do not include the following.

   i) Regularly scheduled janitorial work such as cleaning, and preserving facilities and equipment.

   ii) Work performed in relocating or installing partitions, office furniture, and other associated activities.

   iii) Work usually associated with the removal, moving, and placement of equipment.

   iv) Work aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from or significantly greater than those originally intended.

   v) Improvement work performed directly by in-house workers or in support of construction contractors accomplishing an improvement.

   vi) Work performed on special projects not directly in support of maintenance or construction.

   vii) Nonmaintenance roads and grounds work such as grass cutting and street sweeping.

i) Mission Essential Real Property Assets. Those facilities and infrastructure assets that directly contribute to accomplishment of the program assigned missions or mitigation of environmental, safety or health issues, which if not available, would adversely impact the mission.

j) Optimum Period. That time in the life cycle of an asset when maintenance actions should be accomplished to preserve and maximize the useful life of the asset. The determination is based on engineering/maintenance analysis and is independent of funding availability or other resource implications.

   i) As an example of optimum period as it relates to the reporting of deferred maintenance; if a maintenance action is identified in FY2004 and the optimum period for completion of the maintenance is in FY2005, the activity is not deferred maintenance. The activity would represent deferred maintenance if the optimum period for accomplishing the maintenance is FY2004 or before and work is not performed (e.g., work delayed due to lack of funding or other resources) by the end of fiscal year 2004. In some instances, due to change of mission or other reason, management may determine that work previously anticipated is no longer needed. In these cases there is no deferred maintenance, notwithstanding the previous

condition assessment.

k) Plant, Property & Equipment. Tangible assets that meet the capitalization criteria, that are not intended for sale in the ordinary course of operations, and have been acquired or constructed with the intention of being used, or being available for use by the entity. Plant, property, and equipment includes site infrastructure.

l) Predictive Maintenance. Those activities involving continuous or periodic monitoring and diagnosis to forecast component degradation so that "as needed" maintenance can be scheduled.

m) Preventive Maintenance. Those periodic and planned actions taken to maintain a piece of equipment within design operating conditions and extend its life and performed before equipment failure or to prevent equipment failure.

n) Programmatic Real Property. Refers to reactors, accelerators, and similar devices used by programmatic personnel, acquired with line item funding, and listed in the Facilities Information Management System as "Other Structures and Facilities" under the 3200 series usage codes, such as 3209, 3221, 3251 and 3261.

o) Real Property Assets. Any interest in land, together with the improvements, facilities, structures, and fixtures located thereon, including prefabricated movable structures and appurtenances thereto, under the control of DOE. All real property owned by or leased to the Government or acquired by the Government under the terms of the contract. It includes both government-furnished property and contractor-acquired property as defined in Federal Acquisition Regulation 45.101. DOE-owned, -used and -controlled land, land improvements, structures, utilities, installed equipment, and components are included. Real property and real estate means land and rights in land, ground improvements, utility distribution systems, and buildings and other structures. Real Property Assets are defined by the Federal Property Management Regulations § 101-47.103-12, Real Property.

p) Recapitalization. Major renovations or reconstruction activities, including facility replacements, needed to keep existing facilities modern and relevant in an environment of changing standards and missions. This includes the restoration and modernization of existing facilities but not the acquisition of new facilities or the demolition of old ones, unless the demolition is carried out as part of a renovation project or in conjunction with construction of replacement footprint elsewhere.

q) Repair. The restoration of failed or malfunctioning equipment, system, or facility to its intended function or design condition. Repair does not result in a significant extension of the expected useful life.

r) Programmatic equipment refers to personal property used by programmatic personnel, including personal property meeting the threshold for the list of capital equipment.

3) Reporting Requirement.

a) The deferred maintenance estimate, total annual required maintenance costs, and total annual actual maintenance costs for each building and other structures and facilities (OSF) must be

reported in FIMS. *For OSF 3000 series related personal property (accelerators, reactors etc.); only report deferred maintenance.* (Note: All capital and non-capital real property assets are listed in FIMS as buildings, trailers or OSFs.) Each building, trailer or OSF will have a record in FIMS and within each record are data elements for (1) the deferred maintenance estimate, (2) total annual required maintenance costs, and (3) total annual actual maintenance costs. The field offices/sites will populate these data elements. However, with regard to OSFs, the population of data elements will be limited to the deferred maintenance estimate and the actual and required annual maintenance costs at the FIMS usage code level by site. The Department's deferred maintenance estimate to be reported in the financial statements will be obtained from FIMS. A tab in FIMS titled "Maintenance" displays these fields on a building and OSF basis. Standard reports will be created that will facilitate reporting this data on a Program, Field, Site, Building, and OSF basis.

b) Report an estimate for deferred maintenance for all operating, operational standby and facilities in shutdown pending transfer statuses as indicated by the FIMS "Building Status" data field. Report an estimate for deferred maintenance of facilities in shutdown pending D&D, shutdown pending disposal and D&D in progress status only in those situations where maintenance is needed for worker and public health and safety concerns.

c) The facility and maintenance management team responsible for gathering the above information has several methods for entering data in FIMS. If the DOE Condition Assessment Information System (CAIS) is the source of the information for the deferred maintenance estimate, the data can be entered through the DOE CAIS-FIMS interface. For sites not using DOE CAIS, data extracted from local information sources conforming to a given file format specification can be uploaded in the FIMS data base. If electronic means are not possible, a hard copy of the information should be given to the site FIMS administrator for manual loading. The deferred maintenance update shall be reported in FIMS by September 30, 2004 and be a representation of all deferred maintenance anticipated through September 30, 2004. The Office of Engineering and Construction Management (ME-90) will take the final snapshot for the deferred maintenance estimate on October 1, 2004. The source of information for annual required and annual actual maintenance costs is from maintenance work control systems, maintenance implementation plans, and other maintenance management information systems as exists at the sites. The annual required maintenance costs should have been loaded by March 1, 2004 and the annual actual maintenance costs must be loaded no later than October 30, 2004. A listing of the deferred and annual maintenance cost priorities is identified in section 6. This is the order to be followed when populating the pertinent FIMS data fields. Enter all FY 2005 annual required maintenance costs between December 1, 2004 and December 15, 2004. This will allow the FIMS data snapshot for annual required and annual actual maintenance costs for the FY 2004 report to be taken November 3, 2004, and the data archived.

4) Data Gathering Methods.

a) It is the Department's policy that condition assessment surveys be used to determine the FY 2004 estimates of deferred maintenance.

b) Condition assessment surveys (periodic inspections) are fundamentally important in understanding our physical plant and infrastructure needs. Condition assessments are periodic inspections of real property using universally accepted methods and standards. These assessments result in a

determination of the current condition of the assets, their estimated time to failure, and the estimated cost to correct the identified deficiencies. Deferred maintenance will be calculated using these methodologies and will be reported on a building/facility basis.

c) Inspection intervals and asset emphasis and selection are at the discretion of the site facility managers based on mission and maintenance requirements. However, *condition assessments must be performed on all real properties at lease once during any five-year period using inspection methods in accordance with industry standards.*[3] After five years, all real property will have been inspected at least once and the cycle will repeat. Mission essential real property assets may have a shorter cycle time such as every two or three years. All sites are expected to have a plan of action to inspect all real property on a cyclical basis. Because condition assessments are conducted on a cyclical basis, some parts of the inspections are not current. It is acceptable to adjust results from previous condition assessments to estimate current plant conditions[4]. To do this, first determine if the deficiencies identified in the condition assessments still exist. For deficiencies that still exist, escalate the estimate to correct the deficiencies to FY 2004 dollars. This escalation shall be accomplished using the inflators table contained in the appendix of this document. The DOE CAIS users should utilize the RS Means cost tables to adjust their previous condition assessments.

d) For OSFs, visual condition assessments may not always be appropriate to determine deferred maintenance. For example, underground storage tanks or underground piping systems generally cannot be visually inspected. The accepted practice in this case is to query on-site records for these assets and use engineering data such as studies, tightness test results, ultrasound results or other auditable data sources to determine if repair or replacement is necessary. For this case, the deferred maintenance would be applicable if a recorded deficiency (replacement, relining, testing etc.) is past due (i.e. the optimum period for correction of the deficiency has elapsed as of September 30, 2004). For these OSFs that normally do not lend themselves to inspection, i.e. OSFs that have Physical Barriers Preventing Inspection (PBPI), and lack existing sources of auditable deficiency data, the PBPI designation shall be selected. The FIMS "Deferred Maintenance" entry shall be zero and the Date of Last Inspection entry shall be blank. Please note that the intent of Departmental policy is to conduct condition assessments on OSFs that can be inspected and draw data from existing studies and other sources of authoritative information. Examples of OSFs that can and should be inspected are roads, towers, utility plants and above ground utility distribution systems.

e) The Date of Last Inspection field will normally reflect the date of the most recent inspection. For assets that are inspected more than once per year, the date of last inspection field does not need to be changed until the last inspection prior to September 30, 2004, has been performed. Also, as an alternative, a convention has been established in FIMS such that any inspection date entry of January 1, 2004, will be interpreted to mean multiple inspections were performed for the asset during FY 2004.

f) Maintenance Management Systems are in place to determine maintenance requirements and costs. These systems should provide the facility and maintenance managers with information and tracking systems on every phase of asset maintenance. The sites shall report annual required and annual actual maintenance costs at the building level and at the OSF usage code level. The FIMS

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[3] Reference: DOE O 430.1B *Real Property Asset Management*

[4] NNSA requires its sites to maintain a snapshot of the FY03 deferred maintenance baseline without adjustments.

maintenance tab has accommodations to accept entries for these two data elements. The reporting of this data serves multiple purposes such as:

i) Provides trend analysis of maintenance activities on individual assets and/or groups of assets aggregated locally or complex wide.

ii) Provides a numerical component for performance metrics/indicators.

iii) Establishes potential ranges of maintenance expenditures or activities.

iv) Provides a system to strengthen the departmental internal controls to verify the reasonableness of the deferred maintenance estimates.

5) The standard to which assets should be inspected is up to the discretion of the site personnel. SFFAS No. 6 defines maintenance as the act of keeping fixed assets in acceptable condition and also provides that acceptable services and condition may vary both among entities and among sites within the same entity. SFFAS No. 6 allows flexibility in reporting based on deferred maintenance amounts required to preserve an asset so it continues to provide acceptable service and achieves its expected life, which does not necessarily equate to the cost required to restore a facility to its current use as-built condition. It is management's responsibility to determine what level of service and condition is acceptable.

6) The following listing provides guidance on prioritizing the population of FIMS fields necessary for the deferred maintenance disclosure and related maintenance cost information.

a) Deferred Maintenance Report

i) Active and Excess Real Property

(1) Deferred Maintenance Costs for FY2004 (projected to September 30, 2004)

(a) This is a mandatory field which must be populated *no later than close of business September 30, 2004*. Deferred maintenance data is included in the Department's consolidated financial statements to the Office of Management and Budget. To meet this reporting requirement, the deferred maintenance report will be prepared by ME-90 based on a snapshot of data taken from FIMS on October 1, 2004.

(2) Annual Required Maintenance Costs for FY2004 (as of September 30, 2004)

(a) This data element should have been populated March 1, 2004, for FY 2004. *(Please note that because the FIMS data snapshot will be taken November 3, 2004, for the FY 2004 report, no FY 2004 annual required maintenance data shall be entered until December 1, 2004, to allow for data to be archived.)*

(3) Annual Actual Maintenance Costs for FY2004 (as of 30 September, 2004)

(a) This data element must be populated *no later than October 30, 2004.*

(4) Year of last inspection

(a) This is a mandatory field that must be populated *no later than September 30, 2004.*

(5) Building Deficiency System

(a) This is a mandatory field that must be populated *no later than September 30, 2004.*

(6) Building Status

(a) This is a mandatory field that must be populated *no later than September 30, 2004.*

ii) Excess Real Property

(1) Excess Indicator
(a) This data element must be updated as necessary no later than October 15, 2004.

(2) Excess Year
(a) This data element must be updated as necessary no later than October 15, 2004.

7) Any questions regarding these implementation procedures should be directed to the following individuals:

a) Maintenance and real property - Peter O'Konski (ME-90), (202) 586-4502.

b) DOE CAIS and FIMS reporting methods – Andrew Duran (ME-90), (202) 586-4548.

c) SFFAS No. 6 – Lois Jessup (ME-11), (202) 586-3959.

Appendix:

FY 2004 DEFERRED MAINTENANCE INFLATORS

The following inflators are to be used when reporting deferred maintenance estimates obtained from condition assessments (periodic inspections of plant and equipment) that are not current. For example, if the estimate of maintenance work was prepared in 2001, then multiply that estimate by 1.0542 to escalate the estimate to 2004 dollars.

FROM YEAR TO 2004	INFLATORS
2003	1.0184
2002	1.0381
2001	1.0542
2000	1.0779
1999	1.1057