



Department of Energy

Washington, DC 20585

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MEMORANDUM FOR DISTRIBUTION

FROM:

PAUL BOSCO
DIRECTOR
OFFICE OF ACQUISITION AND
PROJECT MANAGEMENT

A handwritten signature in black ink, appearing to read "PBosco".

SUBJECT:

FY 2012 Real Property Deferred, Actual, and Required
Maintenance Reporting Requirement

Pursuant to DOE Order 430.1B, Real Property Asset Management, Section 5.d.12, this memorandum provides implementing guidance for the FY 2012 deferred and annual maintenance reporting requirements. Please distribute it to the appropriate elements of your organization.

The attached *Implementation Procedures to Report Deferred, Actual, and Required Maintenance On Real Property* applies only to real property (buildings, real property trailers and other structures and facilities) not personal property. The data reported under this requirement is supplementally provided in the Department's Annual Performance and Accountability Report.

If you have any questions or need additional information on this guidance, please contact Mr. Ivan Graff at (202) 586-8120.

Attachment



Distribution:

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Attachment

Implementation Procedures to Report Deferred, Actual, and Required Maintenance on Real Property

1. The following is the fiscal year (FY) 2012 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 and to report annual required and actual quarterly and annual maintenance costs.
 - b. This reporting satisfies the Department's obligation to:
 - i. Recognize and record deferred maintenance as supplemental data within its annual performance and financial reports;
 - ii. Determine the Annual Operating Costs and Condition Index required by the Federal Real Property Council and reported within the Federal Real Property Profile; and,
 - iii. Transmit to the Congressional Committees on Appropriations actual maintenance expenditures against the requested amounts included in the Congressional budget request.
 - c. Reporting and trending deferred maintenance is critical to efficient programming, and compliance with the goals established within the Asset Management Plan and Three Year Rolling Timeline.
2. Definitions/Acronyms¹
 - a. Annual Actual Maintenance Costs. The actual, burdened costs of all maintenance and repair activities in a given fiscal year for a building, real property trailer or other structure and facility (OSF).
 - i. Programs may incur such costs through predictive, preventive, or corrective maintenance, surveillance and maintenance of excess or shutdown facilities, non-construction activities that reduce deferred maintenance backlogs, operating or expense projects consisting of maintenance activities only, and capital funded maintenance including through line items or general plant projects.
 - ii. Programs executing a directed deferred maintenance reduction program such as the NNSA Facilities and Infrastructure Recapitalization Program (FIRP) or applying American Reinvestment and Recovery Act of 2009 funds subject to 48 CFR 52.204-11(d)(10) are encouraged to account for deferred maintenance reduction separately.

¹ References: *FIMS Users and Reporting Guides*, DOE O 430.1B *Real Property Asset Management*, CFO Budget Guidance, 48 CFR 23, and the Whole Building Design Guide

Separate funding establishes cost visibility and generates a deferred maintenance target to measure program effectiveness.

- iii. To facilitate management and cost visibility, industry practice and good management dictate the accrual of actual costs against specific, real property assets (if not major building systems). Therefore, maintenance costs should be reported from asset-level data collected in the Site's Maintenance Management and Financial Management Systems.
- b. Annual Required Maintenance Costs. Estimates of all costs to perform maintenance activities for a building, real property trailer or OSF that one would normally expect to be accomplished as determined by engineering/maintenance/life cycle analysis and vendor maintenance schedules. Included are preventive maintenance, predictive maintenance, corrective maintenance and any other maintenance/repair activity required for which the next fiscal year is the *optimum period of accomplishment*.
- i. 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 cost estimate for resolving the deficiency.
 - ii. Similarly, where maintenance efforts can be aggregated in project bundles thereby reducing 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 repair actions through multiple paving contracts.
 - iii. Although corrective maintenance activities cannot be planned with certainty, include an estimate of these activities, based on historic costs in aggregate annual required maintenance costs at the asset level. For example, a fire protection system notification panel fails inspection and requires immediate replacement.
 - iv. Do not include maintenance requirements remaining after FY 2011 and not planned for accomplishment in FY 2013 or deferred to FY 2013 or beyond.
- c. Betterments. 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 an expenditure should be treated as a betterment requires judgment. When a minor item is replaced in each of a number of similar units, the effect of the replacement as related to each unit, rather than to the cumulative costs, is the proper basis for determining whether or not a betterment is effected. 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. For replaced retirement units, remove from the plant and capital equipment accounts any original costs (including installation costs) and add to the plant and capital equipment accounts the cost of the newly installed items (including installation costs).
- d. CAIS. *Condition Assessment Information System* for the Department of Energy.
 - e. 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.
 - f. 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.
 - g. Demolition. Destruction and removal of physical facilities or systems.
 - h. Direct Funded. Funds allotted to a single program in support of a specific objective.
 - i. Disposal. Permanent or temporary transfer of DOE control and custody of real property assets to a third party who thereby acquires rights to control, use, or relinquish the property.
 - j. 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.
 - k. FIMS. *Facilities Information Management System* for the Department of Energy.

- l. FIRP. *Facilities and Infrastructure Recapitalization Program* for the DOE National Nuclear Security Administration (NNSA).
- m. Indirect Funded. Funds derived from overhead type charges.
- n. 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.
- o. Integrated Design. A process whereby all the members of the building stakeholder community, and the technical planning, design and construction team examine the project objectives, and building materials, systems, and assemblies from many different perspectives. This approach is a deviation from the typical planning and design process of relying on the expertise of specialists who work in their respective specialties somewhat isolated from each other.
- p. Maintenance. Day to day work that is required to sustain property in a condition suitable 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.
- q. 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. Maintenance identified in FY 2012 or before with an optimum period for completion in FY 2011 or before qualifies as deferred maintenance.

- ii. Maintenance previously identified as deferred, i.e. beyond its optimum period, but is no longer needed or its optimum period is now later than FY 2012 no longer qualifies as deferred maintenance.
- iii. Changes to optimum period may occur to active assets only. *Programs should not decrease or eliminate previously identified deferred maintenance when an asset is placed in a shutdown status.* This becomes important historic data. Removal (zeroing out) of deferred maintenance incorrectly identifies the shutdown asset as being in an excellent condition.
 - 1. Asset Condition Index (ACI) calculations include only active facilities. Maintaining deferred maintenance data on inactive facilities does not affect Site or Program level ACI.
 - 2. Only deferred maintenance for active assets is reported supplementally within the Department's financial statements.
- r. Other Structures and Facilities (OSF). Any fixed real property improvements to land not classifiable as a building or real property trailer, e.g., bridges, towers, roads, and fences. It also includes site utility systems used to generate or distribute any services such as heat, electricity, sewage, gas, and water.
- s. Plant, Property & Equipment. Tangible assets that meet the capitalization criteria, are not intended for sale in the ordinary course of operations, and have been acquired or constructed with the intent of being used, or being available for use by the entity. Plant, property, and equipment includes site infrastructure.
- t. Predictive Maintenance. Those activities involving continuous or periodic monitoring and diagnosis to forecast component degradation so that "as needed" maintenance can be scheduled.
- u. 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.
- v. Programmatic Equipment refers to personal property used by programmatic personnel, including personal property meeting the threshold for the list of capital equipment.
- w. Quarterly Maintenance Report. Program office statement of planned and actual maintenance and repair expenditures spanning three months arranged by program and site against the requested maintenance and repair funds included in the President's Budget.
- x. 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 3000 series usage codes, including 3009, 3209, 3221, 3251 and 3261.
- y. 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.

- z. 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.
- aa. Repair. See “Corrective Maintenance.”
- bb. Replacement Plant Value (RPV). The cost to replace the existing structure based on the current usage with a new structure of comparable size using current technology, codes standards and materials.
- cc. Surveillance and Maintenance. Activities conducted throughout the facility life-cycle, including providing, in a cost effective manner, periodic inspections and maintenance of structures, systems and equipment necessary for the satisfactory containment of contamination, and for the protection of workers, the public, and the environment.
- dd. Sustainable Design. A design process that seeks to reduce negative impacts on the environment, and the health and comfort of building occupants, thereby improving building performance. The basic objectives of sustainability are to reduce consumption of non-renewable resources, minimize waste, and create healthy, productive environments.
- ee. Sustainable Products. Materials and equipment meeting performance requirements that are energy-efficient (Energy Star or Federal Energy Management Program (FEMP)-designated), water-efficient, biobased, environmentally preferable (e.g., Electronic Product Environmental Assessment Tool (EPEAT)-registered), non-ozone depleting, non-toxic or contain less toxic alternatives or recycled content.

3. Reporting Requirement

- a. Report in FIMS the FY 2012 deferred maintenance estimate, the FY 2013 total annual required maintenance costs (optional at the discretion of the Lead Program Secretarial Office (LPSO) or Cognizant Secretarial Office (CSO)), and the FY 2012 total annual actual maintenance costs for each building, real property trailer and OSF.
 - i. Each building, real property 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 including maintenance costs incurred separately from rental payments. The field offices/sites will populate these data elements. A tab in FIMS titled “Maintenance” displays these fields on a building, real property trailer and OSF basis. Standard reports have been prepared to facilitate reporting this data on a program, field, site, building, real property trailer, and OSF basis.

- ii. Sites and offices should verify that each building, real property trailer and OSF in FIMS has been populated with an appropriate Replacement Plant Value (RPV). Accurate RPVs are necessary for the Department to generate meaningful condition and facility funding metrics and targets.
 - iii. A list of reporting dates appears in section 4.
- b. The facility and maintenance management team responsible for gathering the above information has several methods for entering data in FIMS. If CAIS is the source of the information for the deferred maintenance estimate, the data can be entered through the CAIS-FIMS interface. For sites not using CAIS, data extracted from local information sources can be uploaded into the FIMS database.
- c. Report in a spreadsheet template² both the direct funded and indirect funded maintenance expenditures incurred in each quarter of FY 2013 by program and by site.
- i. Include as maintenance any expenditure conforming to the definition of annual actual maintenance costs appearing in this attachment.
 - ii. Confirm the quarterly planned maintenance expenditure targets in the second quarter submission.
 - iii. Report the expenditures for each LPSO and CSO at a site separately, regardless of the extents of a CSO’s real property holdings on the site.
 - iv. Quarterly submissions may not adjust previously submitted targets or expenditures. Submissions may revise future targets or incorporate corrections into expenditures for that quarter.

4. Schedule

<u>Deadline Date</u>	<u>Task</u>
09/28/2012	Populate the following FIMS Fields for FY 2012 : <ol style="list-style-type: none"> 1. Deferred Maintenance through the end of the fiscal year 2. Inspection Date 3. Deficiency Systems 4. Status 5. Estimated Disposition Year 6. Excess Indicator 7. Excess Year

² Found at <https://powerpedia.energy.gov/wiki/QMR>

<u>Deadline Date</u>	<u>Task</u>
	8. Meters 9. For Assets with Usage Code 1729, 1739, and 1749 (Roads) <ol style="list-style-type: none"> a. Public Access Miles b. Public Access Lane Miles c. Non-Public Access Miles d. Non-Public Access Lane Miles <i>(Note: Sites may begin entering this data on 08/01/2012)</i>
10/04/2012	FY 2012 Deferred Maintenance Snapshot
11/09/2012	Populate the following FIMS Fields for FY 2012 : <ol style="list-style-type: none"> 1. Annual Actual Maintenance Costs through the end of the fiscal year <i>(Note: Sites may begin entering this data on 10/01/2012)</i> Complete archiving real property assets disposed of during FY 2012
11/13/2012	FY 2012 FIMS Year-end Snapshot taken Archiving of real property assets disposed of during FY 2013 may begin
12/14/2012	Populate the following FIMS Field for FY 2013 as directed by the LPSO / CSO: <ol style="list-style-type: none"> 1. Annual Required Maintenance Costs <i>(Note: Sites may begin entering this data on 11/30/2012)</i>
02/14/2013 05/15/2013 08/14/2013 11/14/2013	Submit FY 2013 Quarterly Maintenance Reports covering: <ol style="list-style-type: none"> 1. First quarter, 10/01/2012 – 12/31/2012 2. Second quarter, 01/01/2013 – 03/31/2013; confirm quarterly planned targets 3. Third quarter, 04/01/2013 – 06/30/2013 4. Fourth quarter, 07/01/2013 – 09/30/2013

5. Data Gathering Methods.

- a. It is the Department's policy that a condition assessment survey (CAS) be used to determine the current condition of the assets, their estimated time to failure, and the estimated cost to correct the identified deficiencies. CAS applies accepted methods and standards fundamentally important to understanding the physical plant and infrastructure needs. Deferred maintenance is calculated using these methodologies and will be reported on a constructed asset basis.
 - i. Other sources of credible facility data may be used to *augment but not replace* an effective CAS program. For example, querying a site's computerized maintenance management system (CMMS) for unexecuted corrective maintenance work orders may provide additional deferred maintenance cost data. Similarly, other special studies or inspection programs (elevator inspections, roof inspections) may also generate appropriate deferred maintenance. However, certain facility management activities such as application of computer-based life cycle cost techniques that

predict maintenance and repair costs, although useful for *fine-tuning CAS activities* (e.g., older building components and OSFs may require more frequent and/or more thorough inspection than their newer counterparts) are not in themselves acceptable for generating deferred maintenance.

- ii. If other sources of credible data are used to augment the condition assessment survey data, avoid double counting deficiencies and the definition of “deferred maintenance” is applied consistently.
 - iii. To ensure accuracy of deferred maintenance data, sites are expected to maintain a linkage between their deferred maintenance data and their maintenance and project data. *When a maintenance task or project action corrects a deferred maintenance item, remove that item from the deferred maintenance backlog.* Sites should not wait until the next inspection cycle to account for corrected deferred maintenance.
- b. Inspection intervals and asset emphasis and selection are at the discretion of the site facility managers based on mission priority and maintenance requirements. However, *condition assessments need to be performed on all real properties at least once during any five-year period using inspection methods in accordance with industry standards, or more frequently or in greater detail if mandated by federal, state or local codes*³. All sites are expected to maintain and follow a plan of action to inspect all real property on a cyclical basis. It is acceptable to adjust results from previous condition assessments to estimate current plant conditions.⁴ For deficiencies that still exist, inflate the estimate to correct the deficiencies to FY 2012 dollars using the inflators table contained in Appendix A. CAIS users should utilize the RS Means cost tables to adjust their previous condition assessments.
 - c. The intent of Departmental policy is to conduct condition assessments on all OSFs and if inspection is impractical, draw data from existing studies and other sources of authoritative information. For OSFs, visual condition assessments may not always be appropriate to determine condition. For example, underground storage tanks or underground piping systems generally cannot be visually inspected. The accepted practice in this case is to use engineering data such as studies, test results, ultrasound results or other auditable data sources to determine if repair or replacement is necessary. For OSFs not conducive to inspection, i.e., those with Physical Barriers Preventing Inspection (PBPI), and lack existing sources of auditable deficiency data, in FIMS select the PBPI designation, enter zero for Deferred Maintenance, and leave the Inspection Date blank. Similar to other maintenance, 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, 2012).
 - d. Inspect periodically (but not less than once in five years) facilities in a *shutdown* condition i.e., unoccupied, minimally maintained and locked; *and awaiting disposition* to assure they are not deteriorating in such a manner as to generate a hazard.
 - i. In general, these assets do not require the detailed, rigorous inspection necessary for

³ Reference DOE O 430.1B *Real Property Asset Management*

⁴ NNSA requires its sites to maintain a snapshot of the FY 03 deferred maintenance baseline with adjustments.

occupied and/or enduring assets but may require more frequent visits by the inspector because they are not being monitored by an occupant.

- ii. Sites should have a written policy and procedures for how assets in this condition are to be inspected within their overall condition inspection program.
 - e. The Inspection Date 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, 2012, has been performed. Also, as an alternative, a convention has been established in FIMS such that any inspection date entry of January 1, 2012, will be interpreted to mean multiple inspections were performed for the asset during FY 2012.
 - f. Information for annual required maintenance costs is derived from the CMMS, maintenance implementation plans, or other maintenance management information systems existing at the sites.
 - g. Information for quarterly and annual actual maintenance costs is derived from the CMMS, financial systems or reports, or other maintenance management information systems existing at the sites.
6. Resolving Deferred Maintenance through Sustainable Products.
- a. Real property owning elements are encouraged to consider their real property assets from an integrated and sustainable design perspective when determining the appropriate approach to address deferred maintenance.
 - b. Where practicable from a life cycle cost perspective, employ sustainable products.
 - c. Use of sustainable products to repair deteriorated conditions at the building component level is not a “betterment” typically but reflects prudent and up to date facility management science.
7. Any questions regarding these implementation procedures should be directed to the following individuals:
- a. Maintenance and real property - Ivan Graff (MA-65), (202) 586-8120.
 - b. DOE CAIS and FIMS reporting methods – Gary Horn (MA-65), (202) 586-9296.
 - c. SFFAS No. 6 – Marcos Garcia (CF-50), (202) 586-3425.

**** End of Attachment ****

Appendix A:

FY 2012 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 2010, then multiply that estimate by 1.03 to escalate the estimate to 2012 dollars.

<u>FROM YEAR TO 2012</u>	<u>INFLATORS</u> ⁵
2011	1.02
2010	1.03
2009	1.05
2008	1.07
2007	1.09

⁵ Inflators derived from non-labor escalation rates provided on page 6 of the FY 2013 Congressional Budget Guidance.
Implementation Procedures to Report Deferred, Actual, and Required Maintenance on Real Property