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Deferred Maintenance Reporting & Reduction – Issues and Updates

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June 7, 2005



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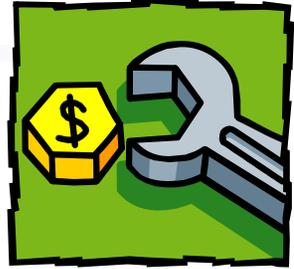
Agenda

- FASAB definition of Deferred Maintenance
- The Department's application of FASAB definition
 - Why not give a more detailed definition
- Optimum period – what is it?
- Condition Inspection versus Life Cycle Costing – mutual exclusivity?
- If we'll never fix it; is it deferred maintenance?
- Obsolescence as deferred maintenance
- Maintenance and repair versus betterments
- Quality assurance of FIMS data (why do it and what has been found.)



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FASAB and Deferred Maintenance

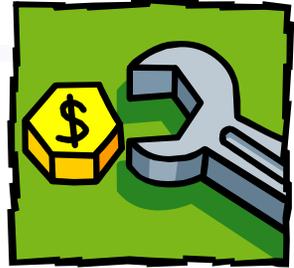


- The Federal Accounting Standards Advisory Board (FASAB) recommends accounting principles for the Federal Government. FASAB defines Deferred Maintenance and Maintenance as follows (SFFAS No 6):
 - Deferred maintenance is maintenance that was not performed when it should have been or was scheduled to be performed but was put off or rescheduled for a future period.
 - Accounting standards define maintenance as the act of keeping fixed assets in acceptable condition and includes preventive maintenance, normal repairs, replacement of parts and structural components, and other activities needed to preserve the asset so that it functions properly and safely. Maintenance does not include activities aimed at expanding or changing the nature of the asset.
- FASAB indicates that preparers of deferred maintenance reports be given “*maximum flexibility*”
 - Condition assessment or life cycle plans....



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FASAB and Deferred Maintenance

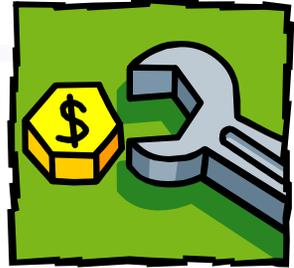


- But...flexibility comes at a price
 - Deferred maintenance is “required supplemental information” within the Department’s Financial Statement; expected to be auditable and verifiable.
 - Deferred maintenance and the quality of its reporting can be considered an indicator of the efficiency and effectiveness of operations.
 - The Inspection of facilities and reporting of deferred maintenance requires good internal control.



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Department's Deferred Maintenance

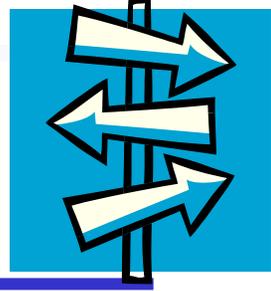


- The Department of Energy Defines Deferred Maintenance as follows:
 - Deferred Maintenance. Maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period.
 - Maintenance. Day to day work that is required to sustain property in a condition suitable for it to be used for its designated purposes, including preventive, predictive, and corrective maintenance.
- Implicit are a number of elements:
 - Competent individuals are in charge of and executing a repeatable and logical maintenance program at each site.
 - Programs, missions, facility types, customer expectations, local conditions etc. are differentiators with respect to when maintenance should be accomplished (optimum period)
- At the Department level, similar to FASAB, the definition has the expectation of *professional judgment* with respect to the identification of the deficiency and determination of its optimum period.



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Optimum Period



- 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*



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Condition Inspection & Life Cycle Costing



- Real Property Asset Management Order requires technical evaluation and reporting of real property condition by facility professionals
- The Department does not accept “desk-top” life cycle cost estimating of deferred maintenance
 - Deferred maintenance reporting is not forward looking
 - Component maintenance and installation records are rarely complete
 - Building component life expectancy are a function of many factors
 - Promotes disassociation of the facility professional from the facilities – you need to see what is out there
- Use of life cycle estimating and other components of business intelligence is encouraged as way to gain greater insight into the condition of the facilities. For example, life cycle intelligence may indicate a higher inspection frequency or more sophisticated assessment techniques.



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If We'll Never Fix It; Is It Deferred Maintenance?



- Reporting of deferred maintenance entails identification of the deficiency and determination of optimum period
 - Many deficiencies and deteriorated conditions are not at their optimum period
 - Some deficiencies may never reach the optimum period (facility management decision) therefore, they can remain planned
 - Painting the accelerator tunnel wall
 - Repairing a pump packing leak
- So yes, a reasonable management decision can be to not report deficiencies that have not passed their optimum period for correction.
- However, a management practice that identifies specific classes of deficiencies (for example painting) as never beyond their optimum point raises concerns regarding management's judgment.



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Obsolescence as Deferred Maintenance



- *An area for improvement is establishment of a consistent approach to obsolescence as deferred maintenance. Some ideas for consideration:*
- Obsolescence - a loss in the utility resulting from intrinsic limitations and/or external circumstances
 - Need to draw a distinction between facility obsolescence and dynamic component obsolescence...as well as quality obsolescence, changes in codes and standards
 - Obsolete facilities (plant records) are *not* deferred maintenance
 - For deferred maintenance reporting; obsolescence replacement is driven by necessity; it is not simply a cost decision (energy efficient lights)
 - Obsolete facility components could be deferred maintenance because obsolescence can be a determining factor in identifying optimum period
- Examples:
 - FPE electric panels (...can not get breakers & repair violates UL listing)
 - R-11 Chillers (...can not get driveline parts)
 - Analog pneumatic controls (...no repair parts and no expertise to repair)



Dynamic Equipment Manufacture Life Cycle



Active

Classic

Limited

Obsolete

- Product, parts and related lifecycle services have been released for sale.
- Product is no longer manufactured, but man'f continues to produce spare parts.
- Full range of lifecycle services focused on drive reliability and performance is provided.
- Enhancements are available as far as technology permits.
- Repair services and parts are available as long as materials exist.
- Critical assets should begin migration to active products.
- Third party recycling services are available (contingent on the market).
- Product support is unavailable.
- Parts are not longer available
- Failure results in long outages and sub-optimal repair practices that become safety issues.



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Deferred Maintenance Window



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Maintenance and Repair Versus Betterments



- Betterments – Capitalized improvements to Plant and Capital Equipment that result in better quality work, increased capacity and/or extended useful life as required to accommodate regulatory and other changes to requirements
 - Construction and Improvements
 - Replacing standard walls with fire proof.
 - Installing a sprinkler system in a building without one.
 - Replacement of system components with significantly improved or superior performance
 - Conversion – change to a new use
 - Replacement of a plant record unit... (Renewal)
- *Betterments are never deferred maintenance*
- Maintenance and repair is typically funded with operating funds
- Betterments are typically funded with GPP¹ or Line Item Projects and include

¹IMPORTANT! A complete and usable GPP may not exceed \$5M.



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Maintenance and Repair Versus Betterments



**Plant Record
Unit:
Building**

The key link between
the Departments
physical inventory and
financial accounts

Retirement Unit: Floor 1	Retirement Unit: Floor 2	Retirement Unit: Floor 3	Retirement Unit: Roof	Retirement Unit: HVAC	Retirement Unit: Computer Room	Retirement Unit: UPS System
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Etc.

An accounting convenience established for
accounting for costs of the major elements of the
plant record unit

Replacement of a deteriorated Retirement Unit
is *usually* funded out of operating funds



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Maintenance and Repair Versus Betterments



- Points of caution in the replacement of a retirement unit as repair & reporting as deferred maintenance:
 - Make certain the retirement unit is a reasonable sub-assembly of the property unit
 - Validate that the purpose of the project is to replace a deteriorated retirement unit and replacement is a correct business decision (i.e. highest NPV)
 - Replacement must demonstrate “Essentially the same type and performance characteristics...”
 - Incidental improvement is ok; “significantly improved or superior performance” is not



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Quality Assurance of FIMS Data



What is the purpose of FIMS validation?

- Gage the robustness of the FIMS data:
 - Validate that asset data is being identified and captured
 - A 90% statistical accuracy
 - Verify consistent approach to the preparation of Department metrics
 - Generate recommendations for continuous process improvement
 - Begin a statistically valid, DOE-wide quality assurance program
- Macro-Level:
 - **President's Management Agenda**
 - The Department's Real Property stewardship report
 - The Department's financial reports
- Micro-Level:
 - Consistency within Programs and Sites
 - Support Site Facility Improvement Programs
 - Demonstration of internal controls



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Quality Assurance of FIMS Data



- A typical quality assurance visit:
 - Review / validate 25 random FIMS building records
 - Generate either agreement (or documented disagreement) why a specific element in a FIMS record is accurate or inaccurate
 - Walk thru a number of the random buildings (say three or four) and examine condition and utilization
 - Understand how FIMS data is being maintained and managed
 - Document other notable facts and data
 - Determine significant ‘findings’ and out-brief



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Quality Assurance of FIMS Data



- Process:
 - The primary procedure is a *paper review* of:
 - Replacement Plant Value
 - Facility Utilization
 - Facility Condition
 - “Paper review” means review of supporting:
 - Building drawings / as-builts
 - Condition assessment reports
 - Work control reports
 - Other internal documentation (space plans, ten year site plan, master plans etc.)
 - Other review procedures:
 - Perform limited building investigation
 - Quality assurance step for condition, use and utilization.
 - Interview / discussions with FIMS and CAS action officers and support



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Quality Assurance of FIMS Data



- Process Continued;
 - Main FIMS Fields being reviewed...
 - Usage Code
 - Ownership
 - Building Status
 - Historical Designation
 - Gross Square Feet
 - Status Utilization
 - **Building Replacement Plant Value**
 - (Includes model selection, geographic factor and site factor)
 - **Deferred Maintenance**
 - (Includes date of last inspection, and value of deferred maintenance)



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Quality Assurance of FIMS Data



- OECM has performed FIMS data validations at five sites –
 - Some common themes:
 - Strong ownership and in many cases, the ownership was apparent up and down the responsibility chain
 - Inspection programs (that are up to date) are yielding repeatable maintenance requirements
 - Most divergence occurs with respect to life cycle analysis; however, sites tend to be consistent within their fence line and can defend decision making
 - Some betterments tend to get counted as deferred maintenance (normally code and energy conservation projects)
 - Bad habit of abandoning un-used HVAC (or other) equipment then listing it as deferred maintenance?!
 - Utilization has tended to be well reported
 - Have run across CPVs in lieu of RPVs and concerns regarding an apparent disconnect between maintenance and RPV
 - Some internal processes scrub out classes of deficiencies and others do not recognize that a deficiency is no longer valid because they do not fully reconcile inspection data and maintenance data



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Thank you

Back-up Slides



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Internal Control Requirements —FMFIA/OMB A-123



- Federal Managers' Financial Integrity Act of 1982 (FMFIA) establishes overall requirements for internal control in federal agencies. The agency head must establish controls that reasonably ensure that
 - Obligations and costs are in compliance with applicable law
 - **Funds, property, and other assets are safeguarded against waste, loss, unauthorized use, or misappropriation, and**
 - Revenues and expenditures applicable to agency operations are properly recorded and accounted for
- Over the years, OMB Circular A-123, has broadened these requirements to include controls over all aspects of an agency's operations.



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Internal Control Requirements —FMFIA/OMB A-123



- During 2004, OMB re-examined A-123 in light of the new internal control requirements for publicly-traded companies contained in the Sarbanes-Oxley Act of 2002.
- The new A-123
 - was issued in December 2004 and becomes effective in fiscal year 2006.
 - realigns the section dealing with the reliability of financial reporting by using the same categories from the COSO **framework—control environment, risk assessment, control activities, information and communications, and monitoring.**
 - provides new specific requirements for conducting management’s assessment of the effectiveness of internal control over financial reporting.