

# PROJECT MANGEMENT PLAN EXAMPLES

## Prepare Project Support Plans and Documentation - Project Metrics Examples

### Example 42

#### 5.1.4 Performance Measurement and Reporting

The subproject manager will communicate subproject technical issues and accomplishments, schedule performance, cost and schedule issues, and corrective action plans, as appropriate, in the Project Directors' weekly 'Path Forward' meeting. However, the primary performance measurement for reporting subproject performance is provided by the performance measurement system. Within the new common database containing core information on Project Hanford, called HANDI 2000, the performance measurement system compares the resource-loaded schedules (budgeted cost of work scheduled [BCWS]), the actual cost of work performed (ACWP), and the actual work completed (budgeted cost of work performed [BCWP]), monthly. The subproject scheduler will meet with the subproject manager and/or cost account manager near the end of the reporting period or the fiscal month, to determine the status of work in progress or scheduled to start during the month, based on the earned value assigned to each activity. This effort results in the monthly BCWP.

Following the final month-end processing of actual cost within the Financial Data System (FDS), the Subproject Planner, Scheduler, and Analyst, will generate performance reports that will compare BCWP to BCWS and ACWP, to determine the cost and schedule variances based on current month and fiscal year-to-date data. (One of the functional applications in HANDI 2000 is the FDS.) The data will be presented in monthly report at the subproject or sub-subproject level, based on complexity and resource levels of the project activities (cost variance  $BCWP - ACWP$  and schedule variance  $= BCWP - BCWS$ ).

In addition, the subproject planner/analyst will develop an estimate at completion (EAC), beginning no later than March, for the current fiscal year activities and out-year life-cycle activities, if required. The EAC will be based on detailed analysis of performance data and subproject managers' assessment of variances, performance, and any relevant changes to baseline scope. The EAC will be evaluated at the two-digit cost element level. (The one-digit cost element includes labor, materials, and contracts. The two-digit cost element detail includes type of labor, type of material, etc.) Development of the EAC should be an ongoing process, with updated information provided from daily, weekly, or monthly reviews with the Subproject management team.

Performance reporting will be in accordance with HNF-MD-018, Rev. 0, *Performance Reporting*. The management directive provides information for continuing a performance reporting process during implementation of the PHMC.

#### 6.2 Schedule Summary

A summary-level project logic has been prepared, at the subproject level, for both the 324 and 327 Buildings (Figures 6-2 and 6-3). In addition to the project logics, a summary level schedule is also provided for both the 324 and 327 Buildings (Figures 6-4 and 6-5). It is currently planned that all project activities will be completed by August 2007.

Major existing milestones within the project management software associated with these schedules, is presented in Table 6-2. Additional milestones will be developed in conjunction with the MYWP. A brief description of the 324 and 327 project schedules and their associated critical paths are provided in the following sections.

Project-level metrics has been developed to track, manage, and control project progress. The metrics is presented in Table 6-3 and provides a brief description of the metric and its purpose. In addition, project-level and other metrics, related to specific work scope, will be developed in conjunction with the MYWP. The metrics will be updated throughout the life of the project.

**Table 6-3. Project Metrics<sup>1</sup>**

Metric Title	Description	Purpose
Buildings Deactivated	This metric will track the progress on the total number of structures or buildings deactivated associated with the 324/327 Building Stabilization/Deactivation Project. The number of buildings will be developed based on structures/buildings with unique numbers as tracked on the Hanford Site property management tracking system. Buildings will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule. Completion of a facility requires that the planned	Metric required for the Hanford Site Technical Baseline.

	activities required to meet the end-points have been completed.	
Square Meters Deactivated	This metric will track the progress on the total number of square meters deactivated associated with the buildings referred to above. The estimate of square meters will be based on overall dimensions of areas to be deactivated. Square meters will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule. Completion of an area requires that the planned activities required to meet the endpoints have been completed.	Senior-level management overview tool. Progress measurement and goal-oriented graphic for building employees.
Curie Reduction	This metric will track the progress on the total number of curies removed/fixed associated with the buildings referred to above. The estimation of residual curies will be based on the supporting appendices: 324 Building Radiological Characterization Report; 327 Building Radiological Characterization Report; and can be modified as additional analysis is completed. Curies will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule.	Track progress towards radiological risk reduction.
End Points	This metric will track the progress on end-point closure. The End-Point to BOE crosswalk provides a baseline of end-points to be completed in any given fiscal year. End-Points will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule. Completion of end-points will be demonstrated by submittal of the closeout packet to BHI.	Senior-level management overview tool. Progress measurement and goal-oriented graphic for building employees.
Cost Variance	Budget and Actuals will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule. (See Chapter 5.0 for monthly analysis).	Senior-level management overview tool.
Schedule Variance	Budget and Actuals will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule. (See Chapter 5.0 for monthly analysis).	Senior-level management overview tool.
Waste Volume Forecast	This metric will track the progress of stabilization and deactivation subprojects, based on waste generated versus waste forecasted, to be generated during subproject activities. In addition, this metric will track the accuracy of waste volume estimates and waste minimization/avoidance. Waste volumes (both solid and liquid) will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule.	Required for the Hanford Site Technical Baseline. Excellent secondary measure of project performance.
Overtime	This metric will track the use of overtime. Planned and actual overtime will be tracked on the y-axis and fiscal years will be tracked on the x-axis. A baseline will be represented on the graphic that is consistent with the PMP integrated schedule.	Building and project manager tool to track and trend overtime versus deactivation progress. Excellent secondary measure of project performance.

<sup>1</sup> Initial project-level metrics will be tracked and reported quarterly. The metrics will be established within 45 days of the approval of the PMP (and subsequent revisions) and will

be updated throughout the life of the project. Additional metrics related to the specific work scope, to be conducted in any given fiscal year, will be developed in conjunction with the Multi-Year Work Plan submittal, prior to the initiation of the fiscal year. In addition, 'critical few' metrics, involving safety and health-related data and radiological program measures, will continue to be tracked under their respective programs.

## **Example 43**

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### **5.4 CRITICAL PROJECT PERFORMANCE MEASURES**

Critical performance indicators selected for implementation will be modified at regular intervals throughout the project to reflect current priorities and needed management attention. The following are candidate critical performance measures for the PFP Project:

- Reference baseline control indicators
  - Reference baseline and projected/actual costs for the total project
  - Reference baseline and projected/actual costs for S&M
  - Fiscal year to date earned value cost and schedule variances
  - Min-safe costs trends
  - Baseline and Total Operating Efficiency as measured by individual process/stabilization systems
  - Material production cost versus total stabilization operating cost
  - Actual versus planned performance on DNFSB Recommendation 94-1 (e.g., number of cans stabilized, liters of solution stabilized, etc.), Tri-Party Agreement, DOE-HQ, and RL milestones
- PFP engineering performance indicators
  - Processing performance indicators, including rate of stabilization processing, number of cans processed, and loss-on-ignition test results
  - Design Engineering and Configuration Management performance indicators
  - Requirements Management performance indicators
  - Facility and Plant Conditions performance indicators, including HEPA filter operability, fire system impairments or restrictions, vault safety and inventory system status, criticality alarm system status, and stack monitoring system status
- Personnel experience utilization (trained, cleared, and qualified)
- Systems, areas, and structures deactivated/dismantled to date
- Lost workday cases and lost workday case severity rate
- Violations of federal or state laws and regulations
- DOE-reportable off-normal events
- IAEA inventories: actual versus scheduled
- PFP Corrective Action Management System performance
- Training statistics
- Operational Safety Requirement related performance measures