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Supplier shall develop a baseline plan that is mutually agreed upon with Fluor Marine Propulsion (FMP) prior to the start of work. This baseline plan shall be organized by a Work Breakdown Structure (WBS) that identifies the deliverables to be produced. The WBS shall provide the overall structure for the baseline plan and for controlling and reporting on cost and schedule performance. The WBS is used to organize the cost estimates, schedules, and reports, and to assign organizational responsibility, charge numbers and technical requirements for each deliverable. The WBS shall have sufficient levels of detail to allow adequate resource and schedule control by the Supplier.

The baseline plan shall include the following items at a level commensurate with the complexity of the work:

1. Adequate narrative task definitions that describe the work activities outlined in the WBS required to produce the deliverables. The task definitions should enumerate lists of specific inclusions and exclusions and are intended to avoid omissions, ambiguity, overlaps, and duplications.
2. Cost estimates for each deliverable in the WBS. Cost estimates are typically performed either bottom-up based on engineering estimates of resources required for each activity required to produce a deliverable, or top-down using historical return costs for similar deliverables, with engineering adjustment for differences in scope. Cost estimates shall be justified and characterized by reference to the underlying scope assumptions and sources of estimating data.
3. Time-phased resource estimates (e.g., labor hours), associated direct costs, and the basis for these estimates. Subcontracted supplies and services shall be supported by sub-tier supplier quotes to the extent practical. In the absence of sub-tier supplier quotes, engineering estimates for these cost elements shall provide a basis for the estimate.
4. Overall schedule for the accomplishment of the work including task schedules with measurable milestones. These task schedules and milestones shall be integrated with resource estimates to provide an objective criteria for determining physical completion relative to cost expended. The planned physical completion as a function of time shall be provided.

Events vital to completion of deliverables are designated as milestones. Since physical % complete reporting is a requirement of a monthly reporting system, milestones shall normally be no more than two months apart. It is very difficult to determine physical % complete on the basis of widely separated milestones. Schedule milestones shall be re-forecasted relative to the baseline as part of the monthly reports when progress-to-date or other circumstances indicate that re-forecasting is required.

The schedule arranges the various activities to be accomplished in precedence relationship so that dependencies of one upon another can be examined and delay effects evaluated. Schedules are usually presented graphically. The longest critical path determines the completion date for each deliverable and when combined into an overall schedule, the critical path establishes the completion date for the work.

Note that schedule development is similar to cost estimate development and requires the same justification and characterization of assumptions and sources of estimating data.

To support an analysis of the realism of resource and schedule estimates, the Supplier shall

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provide a comparison of proposed resources and schedules to actual resources and schedules for similar work performed within the past five years or as specified by FMP.

5. Reconcile cost and schedule estimates relative to available resources and develop a time phased cost, schedule, and physical completion baseline at the WBS level agreed upon by FMP and Supplier. The cost/schedule/% complete baseline is a roll-up of the schedule and resource requirements described above. This baseline shall be used for cost/schedule control, reporting, measurement of physical completion, and variance analysis.

FMP and Supplier shall agree upon the WBS level at which controls shall be implemented and the reports required to be provided to FMP. It is common for schedule reporting to be done one WBS level lower than cost reporting.

Control cost/schedule to within the established baseline. Cost/schedule performance analysis shall be done with sufficient frequency to identify trends and enable early corrective action to be taken. Forecasts to completion shall be made on the basis of these analyses.

All of the above steps provide the tools for management action. None of these tools will replace management evaluation of the presented facts, management judgment, and prompt action to maintain control.