

**LIFE
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MANAGEMENT**

Good Practice Guide
GPG-FM-006

Performance Analysis and Reporting

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1. INTRODUCTION

Reporting requirements exist at all program, project, and contractor levels to show different combinations of data and degrees of detail. Reporting becomes cost effective when requirements meet but do not exceed the needs of each user, and when the level of report detail is consistent with the level of management and management responsibility. For example, contractor and project offices need a greater level of detail than the program offices.

This Guide provides suggested reporting formats to help project and program offices establish reporting requirements and package information on project status. The formats and data elements may include information that is not readily available in standard formats. Format ideas and instructions are presented for project baselines, work scope, technical requirements, schedule, cost, funds, and the integration of these data elements.

This Guide can be used to develop or revise reporting requirements for a project. The sample formats are suited for different size projects, such as strategic systems, line items, and General Plant Projects (GPPs). The "application" section of each format addresses the size of project for which it is best suited. For example, the Total Project Cost Performance Report, which uses earned progress, is best applied to strategic systems. It is less suitable for smaller projects, such as line items or GPPs.

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2. PRINCIPLES AND PROCESSES

Report formats are included to facilitate presentation of the data elements to the project manager. Many meaningful data elements, data element combinations, and formats can be applied to a particular set of circumstances. However, none is appropriate for all circumstances. The project manager should determine which data elements apply based on:

- priority objectives and associated performance measures,
- project size (quantity of data available),
- potential risks and consequences,
- balance between report volume and ability to assimilate information, and
- value of information relative to cost of acquisition.

The reports and data elements in this section are presented as they might be reviewed by a project manager using a top-down and management-by-exception approach.

"Management by exception" is a method for a manager to review only the areas that appear to be operating outside a normal or acceptable range. This approach is appropriate when continuous management attention to all project details is impractical. The reports should assist in the following.

- Early identification of potentially damaging trends and occurrences.
- Minimization of management time necessary for review of detail.
 - Clear, uncomplicated, presentation of information.
 - Clear representation of problem significance.
 - Focus on relevant issues.
- Reasonable cost of data acquisition and provision of reports through utilization of data and principles supported by common, commercial PC hardware and software.

The formats are provided as one or both of the following.

- A blank form with instructions.
- A blank form with sample, hypothetical data.

2.1 Work Scope Reporting and Analysis

This section demonstrates project status reporting in terms of technical unit quantity and work scope. Work scope is often stated in terms such as man-hours or dollars. Because scope quantities are a direct measure of work status, they can be extremely effective for

rapid communication and understanding project work status, including cost and schedule status.

2.1.1 Work Scope Quantity Report

Purpose. The Work Scope Quantity Report (attachment 1, with instructions in attachment 2), its data base, and the related charts (Figures 1 - 4) show the types of project tasks being performed and the measures of current and projected progress. The trend information offered by the time-phased charts can help management focus on relevant issues.

Application. The Work Scope Quantity Report displays incremental and cumulative planned and completed unit quantity information for each key commodity. This information can indicate the status of commodity installation or task effort. The time-phased data in the report data base can be plotted for each effort to offer a variety of valuable charts.

Initially, an incremental and cumulative representation of the work plan can be plotted as shown in Figure 1. Subsequently, the work performed can be plotted relative to the plan so that progress can be easily seen and understood. This is illustrated in Figure 2.

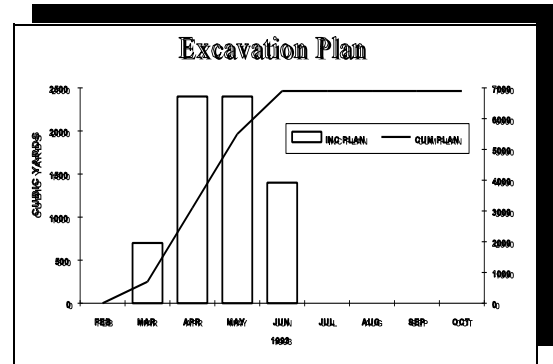


Figure 1

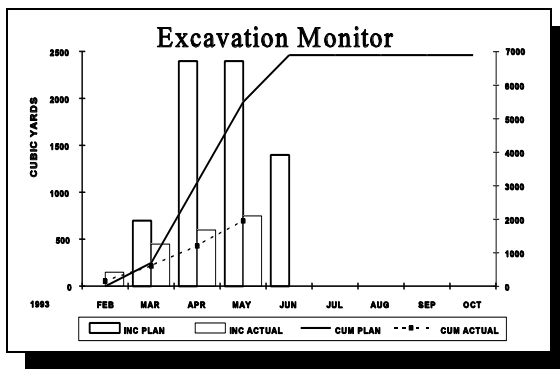


Figure 2

Sometimes significant problems are encountered, progress is unsatisfactory, and a remedial action plan is necessary. As shown in Figure 3, remedial action plans and related progress reports can be published as necessary.

When problems are resolved and the value of frequent monitoring is lost, the project manager can report incremental and cumulative progress forecast information as regularly shown on Figure 4. On projects with many key commodities and efforts, monitoring a few technical indicators that represent areas of project emphasis at various stages can be an inexpensive, effective method of reporting technical project status. For example, small bore piping installation is often a major project effort that reflects the status of many other

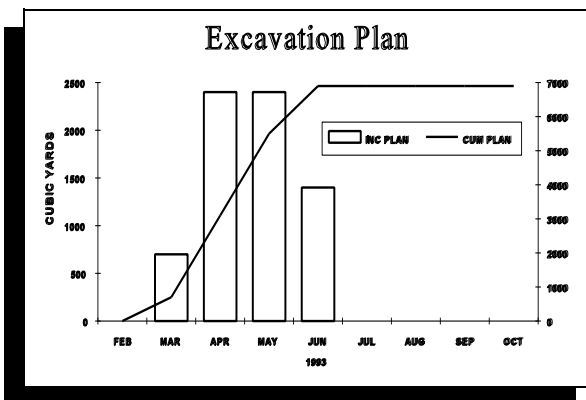


Figure 3

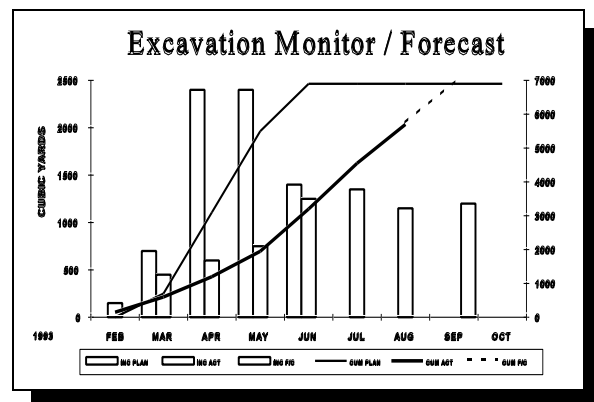


Figure 4

efforts such as large bore piping installation, structural steel erection, and equipment installation. Electrical above-ground cable installation is often a major project effort in the late project phase and can indicate related late project efforts such as pipe rack, cable tray, and conduit installation.

Sample Analysis. The sample Work Scope Quantity Report (attachment 3) and related charts (Figures 1 through 4) compare data on different status dates, showing the value of information at various points. This allows management to focus on issues that affect current and projected task progress. The charts show the plan prior to commencement, the early trending information indicating a problem, the information during the increased reporting frequency period, and the task history and completion forecast near completion.

The sample Work Scope Quantity Report shows that progress has been achieved in 5 of the 16 commodity/effort areas (excluding labor, which applies to all areas), leaving 11 areas in which work has not yet commenced.

According to the Work Scope Quantity Report, excavation, the major focus of this sample analysis, achieved less progress than planned this month and to date. The overall scope has grown by 10,360 man-hours to a current baseline value of 151,590 man-hours, although the scope of small bore piping and lab samples has diminished by 400 LF and 500 samples respectively.

The Excavation Plan (Figure 1) shows a 4-month duration beginning in March, with peak progress in April and May at approximately 2400 cubic yards (CY) for each of the 2 months, ending in June with a total of 6900 CY removed.

The Excavation Monitor (Figure 2), updated through May, shows that excavation began early in February, and that only 2000 out of the 6900 planned to date CY had been removed at a slightly increasing rate.

The weekly Excavation Remedial Plan (Figure 3) could have been initiated because, as described on the sample Work Scope Performance Report (attachment 3), a significant and potentially enduring problem was encountered during the first plan month. This Remedial Plan, updated as of June 25, shows that the rate of progress remained relatively constant through May 21, and then effectively doubled as the strategy in the Work Scope Performance Report was implemented. The remedial plan to complete the effort on time after falling behind schedule was displayed as a benchmark but was not achieved, which illustrated the need for immediate action. After it was clear that an effective remedial strategy was successfully implemented, weekly reporting was discontinued because it no longer justified the cost.

The Excavation Monitor/Forecast chart (Figure 4), updated through August, shows that the rate of excavation increased at the end of May, and projects that the task will close in September if that rate is maintained.

2.1.2 Work Scope Performance Report

Purpose. The sample Work Scope Performance Report (attachment 4, with instructions in attachment 5) provides a concise narrative account of work performed and problems encountered. The narrative format communicates complex subjects by explaining integrated technical, schedule, and cost factors.

Application. This report should describe work performed at the level immediately beneath that for which the DOE project manager is responsible. In extraordinary situations, this report can be applied at lower levels of the management structure. A general account of work performed should be reported. Any significant problems should

be described succinctly, with root causes identified, related significant factors such as cost and schedule impacts explained, and remedial or preventative strategies described.

The project name, subject area (i.e., WBS), subject area budget, actuals to date, relevant milestone information, status date, and name of the project manager (or designee) should be included.

Sample Analysis. The Work Scope Performance Report (attachment 6) appears in the performance section and explains that 550 CY had been excavated to date at the end of May 1993. This section states that work began early, but also mentions a problem in the Problems/Issues section. The budget for the Remediation Bench civil work is \$2.7 million, against which actuals of \$128,000 have been incurred to date.

In the Problems/Issues section, the technical problem, "encountering mostly rock when mostly naturally compacted soil was expected," is clearly stated, as is its significance. The statement, "if this is indicative of the future schedule and cost will be impacted," describes the schedule and cost impacts sufficiently at this early stage of the project. The next report should state the cost and schedule impacts more definitively.

Actions toward resolution are currently underway and are described to verify the belief that existing conditions will remain as follows: "Soils analyses are currently being performed." The report explains that more appropriate equipment for such conditions is being mobilized for application upon verification. The report also explains that "performance will be tracked weekly" against a recovery plan (see Figure 3, the Excavation Remedial Plan) "until the potential for schedule and cost overruns is diminished."

2.2 Schedule Reporting and Analysis

The information, information combination, and report format in this section are for tracking extraordinary conditions. Traditional scheduling reports that normally include tabular data, such as dates, durations, total float, and variances, are not included in this Guide. However, each of these data elements does exist in one or more of the attached formats, and certain individual sections of these reports resemble traditional reports.

Each report contains multiple sections, many of which are valuable alone, without the support of the companion sections exhibited on the examples. On smaller, less complicated projects, it may be more effective to include fewer sections than exhibited in the sample formats. However, on more complicated or larger projects for which vast data

quantities are available, the combined formats can help show project status in key areas as well as areas that warrant management attention.

2.2.1 Schedule Trends Curves

Purpose. The Schedule Trends Curves Report (attachment 7, with instructions in attachment 8) shows the general condition and trend of any collection of schedule activities, easily comparable to the same conditions and trends for other sets of schedule activities. It is a broad indicator of both completion date variance *and* total float degradation for significant schedule areas and the total project. This report is designed to rapidly identify project areas that require prompt management attention for avoidance or mitigation of future problems. It should be used as an alternative to management review of schedule detail, which often results in fixation on less significant problems. This report can provide the benefits stated above without demanding excessive management or time.

Application. This report is most effective when applied to multiple crucial project areas and viewed individually for information, *and* in a group with all of the other area reports for comparison. It will rapidly and effectively communicate schedule status and areas that warrant further scrutiny, especially when viewed with the Bar Chart Schedule and Earned Progress Charts or Milestone Schedule and Earned Progress Charts for the same areas.

This report should be developed for any meaningful collection of activities from significant milestones to the entire project. The term *schedule area* refers to the part of the project schedule that represents a part of the entire project such as a geographical area or process system. Similarly, the term *project area* refers to a part or subcomponent of an entire project as in those examples above. The two data elements contained in this report, Most Critical Total Float (MCTF) and Average (completion date) Variance from Baseline, are key indicators that are plotted for each reporting period to provide trend information.

Most Critical Total Float (MCTF). The MCTF within a crucial project area plotted for each report period provides a quick "at-a-glance" indication of relative schedule criticalities. It also shows tendencies toward project schedule criticality.

Project critical float paths (those paths with zero or less float) usually do not flow through each packaged schedule area; however, some minimum float path does exist. The value of that minimum float path is the MCTF for the subject area. MCTF is reported to show a tendency toward criticality so that prompt corrective action can be taken. Traditional reporting of "near critical" float (i.e., 20 days or less) fails to identify reversible float trends in time for effective remedial action. This chart clearly illustrates float degradation

regardless of float value. A significant negative slope for three or more consecutive periods warrants management attention, regardless of total float value.

Average Variance from Target. The average variance from target (the target is normally the baseline) of all activities in the same crucial project area is the sum of the forecast completion date variance from target for all subject area activities divided by the number of activities. When plotted for each reporting period, this indicator provides a quick "at-a-glance" illustration of broad degradation or improvement within significant schedule areas over time, the relative tendencies of each area, and the contribution of each area to the overall project schedule trends. This indicator represents the magnitude and overall significance of the collective activity variance.

Plotting of MCTF and average variance from baseline on the same chart and time scale shows the schedule condition. For example, if average variance from baseline shows continuous and significant trending downward, and MCTF is level or tracking upward, significant total float degradation is probably occurring on another float path(s) within the subject area. Ultimately, another float path in the area may become the MCTF path and tend toward criticality. This unidentified float degradation would not be evident by viewing MCTF alone. However, the Activity Trend Exception Table (section 2.2.4) and Milestone Trend Exception Table (section 2.2.5) are designed to effectively convey such information. When questionable trends or conditions are displayed on the Schedule Trends Curves, the Exception Tables provide the next level of detail.

Sample Analysis. The sample report (attachment 9) shows that work on the Agent Quantification System for the Demilitarization Project commenced August 11 with approximately 16 days MCTF. Current MCTF is approximately 20 days, although it dipped to zero three reporting periods ago on November 3. However, this area has experienced a -40 day average variance from baseline on a downward trend since work began 15 weeks ago. Although MCTF has increased over the past few reporting periods, the negative trend in average variance from baseline probably has a corollary negative trend in another float path that will ultimately overtake the current MCTF path and trend toward criticality. This trend warrants further scrutiny and review of the Activity Trend Exception Table. The responsible engineer should be prepared to discuss details including remedial action plans.

2.2.2 Bar Chart Schedule and Earned Progress Charts

Purpose. The Bar Chart Schedule and Earned Progress Charts report (attachment 10, with instructions in attachment 11) illustrates schedule status, summary earned progress status. This three-part presentation shows the correlation of these elements, which can be

valuable in the quantitative identification of contributors and impediments to large projects. When viewed with the Crucial Area Schedule Trends Curve for the same areas, this chart can rapidly and effectively communicate schedule status and highlight areas that warrant further scrutiny.

Schedule progress and status relative to the baseline plan are illustrated in the bar chart section. Planned, actual, and forecast progress status for the group of bar chart activities is displayed in the Summary Earned Progress section. Earned progress status for each of the contributing major work areas is exhibited in the Work Category Earned Progress section.

Application. This format (attachment 10), with each of the three sections in the sample (attachment 12) is most effective when applied to major project areas and/or the total project where each area makes multiple significant contributions to progress, but the contribution of each is inconspicuous. On smaller or less complicated projects, application of one or two sections of this chart may be more appropriate. The chart includes the three sections below.

- Bar Chart Section.
- Summary Earned Progress Section.
- Work Category Earned Progress Section.

Bar Chart. The bar chart illustrates the following information for each activity on a relevant time scale.

- The target (usually baseline) duration with target start, finish, and intermittent non-work periods.
- Actual duration, start, and finish dates.
- Current status date.
- Forecast duration including forecast start and finish dates.
- A target-schedule-based status indicator in the form of coloration/patternization (shading) applied to the target bar. (A second bar can also be used effectively.) The target bar is shaded based on the progress earned to date, up to the point in time where that much progress was planned.

- Critical activities (depicted on the forecast bar). Note: At the option of the project manager, when schedules are grouped by crucial areas, "most critical" or "subcritical" activities (those with >0 , but significantly small total float) may be included; however, such activities should always be easily distinguished from critical (zero or less float) activities.
- Milestones. (All target, actual, and forecast start and finish bar criteria apply.)
- Tabular assessment of earned progress.
- Tabular display of current total float.
- Tabular display of remaining duration.
- Activity description.

Summary Earned Progress. This section, plotted on the same time scale as the bar chart, displays summary planned progress, actual progress, and forecast progress for the collection of activities in the bar chart.

Work Category Earned Progress. This section provides a planned progress-to-date bar and an earned progress-to-date milestone display for each participant to illustrate contributions to progress. The line item labeled "total" should be consistent with the Summary Earned Progress curves.

The project manager is encouraged to group schedules by crucial project areas and include an overall target versus actual earned progress line curve to show the earned progress status of all bar chart activities. This should include the third earned progress work breakdown chart to identify significant contributors to variances in earned progress and schedule achievement.

Sample Analysis. The sample Bar Chart Schedule and Earned Progress Charts Report (attachment 12) shows that work in the subject area began early and, although some activities are ahead of schedule, most are behind. Projections indicate that completion will be 3 weeks late. In terms of earned value, the subject area is 33 percent complete, 7 percent short of the 40 percent that was planned for this point in time. The following status for each work category is displayed.

	<u>Planned</u>	<u>Earned (to date)</u>	<u>Variance Condition</u>
Core Drilling	49%	70%	21% ahead
Analysis	50%	57%	7% ahead
→ Excavation	40%	17%	23% behind
→ Remediation	14%	11%	3% behind
Backfill	0%	0%	N/A
Vegetation	0%	0%	N/A

The Excavation and Remediation work categories are 23 percent and 3 percent behind schedule respectively, making them responsible for the late schedule. Depending on the type of excavation and remediation efforts and their associated weighting, the remediation effort may have influenced the substandard status more than the excavation effort, even though its variance is not as great as the excavation effort. The effort to recapture lost progress and mitigate cost and schedule impacts should begin with review of these two work categories.

2.2.3 Milestone Schedule and Earned Progress Charts

The Milestone Schedule and Earned Progress Charts report (attachments 13, 14, and 15) contains data elements and conventions for milestones rather than activities. Because milestones have zero duration by definition and are either 0 percent or 100 percent complete, the remaining duration and % EP (Earned Progress) fields have been replaced by planned and current completion date fields in this report.

2.2.4 Activity Trend Exception Table

Purpose. The Activity Trend Exception Table (attachment 16, with instructions in attachment 17) lists schedule activities that warrant management attention based on their violation of total float, total float trend, and completion date variance thresholds. The detail in this report, correlated to the schedule trends curves, helps explain information in the curves and facilitate remedial action plans.

Application. This report is effective for large project schedules containing vast data quantities, especially when used in support of the Schedule Trends Curves. This report should be structured to correlate with the Schedule Trends Curves so that relevant details are readily available.

The project manager should determine threshold levels for inclusion in this report and should change those levels as more information about project risks becomes available. The data elements to consider are as follows.

- **Completion Date Variance** - Difference between current forecast and baseline completion dates.
- **Total Float Trend Variance** - Degradation in activity total float for the past three reporting periods represented by the columns titled "2 Prior pds," "Last pd," and "Curr pd," in which the actual total float values at the close of each period are applied. The Total Float Trend threshold in the sample report is three consecutive 10 percent or greater losses (reductions in float value).
- **Total Float Variance** - Difference between current forecast total float and baseline total float.

Sample Analysis. Activity 1 is listed in the sample Activity Trend Exception Table Report (attachment 18) as a result of violating all three variance thresholds described above.

- The Completion Date Variance is -70 days because the baseline completion date is 12/18/94 and the forecast completion date is 2/26/95.
- The Total Float Trend has diminished by greater than 10 percent for each of the past three report periods (74 to 65 to 53 days of total float).
- The Total Float Variance is less than -20 because the baseline float is 86 and the current schedule float for this activity is 53.

This activity is behind schedule and although it contains significant total float, it appears to be in danger of becoming critical and impacting the project completion date. The fundamentals of this activity and its predecessor activities should be reviewed.

Activities 2 and 3 are included in this report because they have violated the Total Float Trend threshold, face the same peril, and should receive the same action as the Activity 1.

Activity 4 is included on the report because it has violated the Completion Date Variance threshold. While this could be costly and deserves attention, it does not present the threat described for Activities 1, 2, and 3.

2.2.5 Milestone Trend Exception Table

See Activity Trend Exception Table described in section 2.2.4. The Milestone Trend Exception Table Report (attachment 19) shows data elements for milestones rather than activities. Because milestones have zero duration by definition, the duration fields have been excluded from this report. (attachment 20 contains instructions for the report, and attachment 21 contains the sample report.)

2.3 Cost Reporting and Analysis

Establishing a cost baseline, monitoring actuals against that baseline, and measuring contractor cost performance are fundamental functions of project management. DOE project and program managers need cost information from the contractor on a regular and frequent basis to fulfill fiscal responsibilities and make informed decisions.

This cost information is generated from the contractor's project control system, which provides cost reports in the formats and at levels of detail needed for the various levels of DOE management. Cost information by itself is not a complete picture of project status or health. The contractor's project control system should provide information from other components (e.g., technical, schedule, funds and resource information). Integrating cost information with other information will help ensure an accurate picture of project status and health, which includes:

- estimated costs time-phased in accordance with the project schedule to create a project cost baseline,
- the entire work scope included in the estimate and subsequently in the cost baseline,
- actual costs compared with planned costs in the cost baseline,
- actual costs compared with the amount of work earned, when applicable, and
- forecasts of completion costs developed from actual costs plus an estimate of costs to complete remaining work.

Numerous cost data elements may be requested from the contractor; however, not all are required, and their correct combination is necessary for meaningful analysis. The cost data elements used by DOE are represented in the example reports provided in this section and are combined for the most meaningful analysis. These cost reports, like reports in other

sections, are formatted to describe how the elements are intended to be applied; the formats can be changed to fit project or program management needs.

2.3.1 Total Project Cost Plan

Purpose. The Total Project Cost Plan documents a project's cost baseline in monthly or quarterly increments as applicable. The project's entire period of performance should be covered as follows.

- Prior fiscal years.
- Current fiscal year.
- Subsequent 5 years, by year.
- Total of the remaining fiscal years.

As indicated by its title, the plan is intended to reflect total project cost, including capital and operating expense. The plan format includes contractor management reserve, DOE contingency, and the potential fee amount. The plan is updated each fiscal year to finalize and time-phase the current year's budget. It can be updated more frequently if necessary.

Application. The Total Project Plan can be used to develop and maintain a project or subproject cost baseline. The plan represents the baselined project budget (or portions of the project budget when used on contractor/subcontractor arrangements). The baselined budget represents an agreement between the DOE and contractor, and approval of the plan is indicated by signatures from each manager.

The cost plan format assumes organization of data by Work Breakdown Structure (WBS). WBS is a practical and effective method of organizing work effort and integrating costs with schedule and work scope. A cost effective application of this plan and the subsequent status reports depends significantly upon the level of detail established, which should equal the reporting level from contractor to DOE. For example, if the DOE project manager requires WBS level three reporting from the contractor, then the cost plan should contain data at level three. Judgment should be used when selecting a reporting level that will be imposed on the contractor. Requiring a level that is too low can increase the cost of project management and create too much information. Requiring a level that is too high can mask problems and render trending ineffective.

After it is completed or modified and placed under change control, the plan becomes the baseline to which actuals and earned progress are compared.

Sample Analysis. Attachments 22 and 23 are the Total Project Cost Plan format and instructions. Attachment 24 is the plan as it might look when completed at level three. Analysis of the data is not performed since it only represents the project baseline, and the format is not used to record actuals or earned progress. The cost baseline is normally graphed for comparison with actual and earned data. (See section 2.3.2, Total Project Cost Management Plan, and section 2.3.3, Total Project Cost Performance Report.)

2.3.2 Total Project Cost Management Report

Purpose. The Total Project Cost Management Report works with section 2.3.1, Total Project Cost Plan; planned budget amounts in the cost management report are taken directly from the collection of actual cost data, comparison of actuals with planned, and provision of estimated completion information. Like the cost plan, the cost management report captures capital and operating expense data, managing to total project cost; however, capital and operating expense data can be segregated if desired. The report also provides cumulative and current year cost information as described below.

- *Current fiscal year cumulative-to-date.* Planned is compared to actual and the calculated difference is shown in the report.
- *At-completion year end.* This category is also dedicated to the current fiscal year, providing cost completion estimates and the resultant variances.
- *Total project cumulative-to-date.* Included are prior and current fiscal years. This provides the report user with an overall summary.
- *At completion total project.* Provides estimated completion costs for the entire project period and the resultant variances.

Application. The Total Project Cost Management Report can be applied to projects or subprojects requiring cost management reports and analysis when earned progress is not a requirement. It is most effective for line item projects above the GPP level and below the major project level. Reporting can be done on a quarterly basis, but monthly reporting is recommended, accompanied by trending information. The report should also be used with a schedule report, a technical and work scope progress report, and a funds management report. Although it is developed primarily for contractor reporting to DOE, the report can be used by a prime or integration contractor to collect cost information from its subcontractors.

The cost management report should use the WBS approach. The level of detail should be consistent with that in the cost plan. That is, if level three was used in the cost plan, the cost management report should be consistent with level three.

Sample Analysis. Attachments 25 and 26 show the Total Project Cost Management Report format with instructions. Attachment 27 is the report as it might look when completed. Note that the example uses WBS level three, consistent with the cost plan example in attachment 24.

The cost data from a cost management report can be graphed to establish trending curves, show historical performance, and give at-completion information. As shown in the Figure 5, planned cost and actual cost are compared. A positive trend is shown, resulting in a positive cumulative spend variance and a positive variance at completion. The spend variance is calculated by subtracting actuals from planned. Variance at completion is calculated by subtracting estimated from planned. If conditions were unfavorable, either the actual line and completion estimate (or both) would be shown above the plan line. The same type of chart can be used for the current year and the entire project.

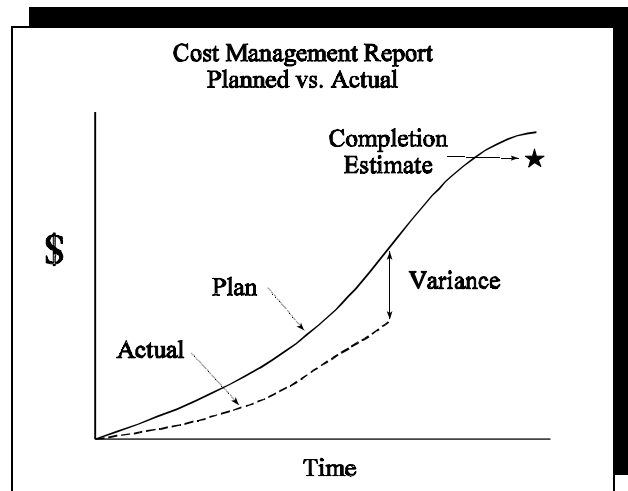


Figure 5

Further analysis of the variance should show the variance cause. Cost variances, either favorable or unfavorable, can be attributed to price or usage variances from one or more cost elements such as labor, subcontracts, material, or other direct costs. In addition to graphs, written analysis should be provided by the contractor to define the cost variance cause and integrate the analysis with schedule, work scope, and funds.

Graphs from the cost management report provide the project manager with trend visibility. Figure 6 compares the planned completion budget with the estimated completion cost. The planned completion budget will change to incorporate approved change control actions, and the estimated completion forecast can vary on a monthly basis. Analysis of the inset graph indicates that initial estimates projected an underrun. Approximately 25

percent of the way through the time period, problems caused estimates to stay consistently above baseline changes. The result is an unfavorable variance at completion.

Completion cost forecasts should be developed for all projects regardless of project size or type; however, grading may apply to the estimating method. In contrast, a comprehensive estimate (i.e., bottom up) and critical path schedule can be used when developing a completion estimate for a strategic system, and smaller projects such as line items or small subprojects can use an expert opinion. The completion estimate should consider the following factors.

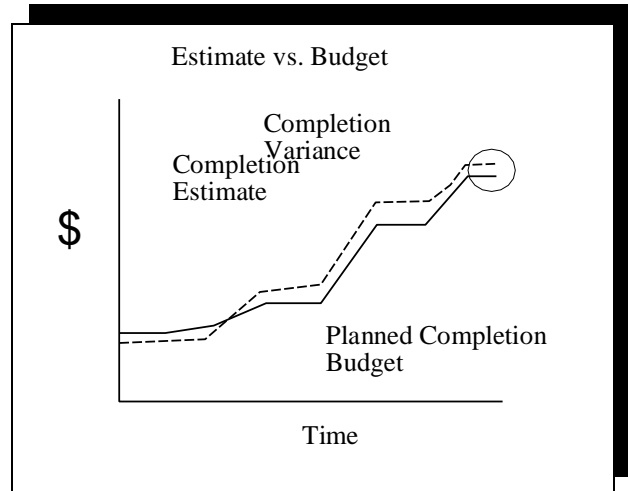


Figure 6

- Unrecoverable schedule variances.
- Actual contractor performance and costs to date.
- Amount of work remaining and expected contractor performance.
- Level of risk for work remaining.
- Definitized and undefinitized scope changes.
- Potential contract claims liability.
- Overhead burdens, both actual and planned.

To figure a completion estimate, the actual cost to date should be added to an estimate for all remaining work. An updated schedule should be a primary factor in completing the estimate calculation, considering remaining work and expected efficiencies. The DOE project manager should accept only completion estimates developed with justification by experienced contractor personnel.

2.3.3 Total Project Cost Performance Report

Purpose. The Total Project Cost Performance Report works with the cost plan described in section 2.3.1, Total Project Cost Plan; planned budget amounts in the cost management report are taken directly from the cost plan. The cost management report facilitates the collection of actual cost data and earned progress, comparison of planned and earned with actuals, and provision of estimated completion information. Like the cost plan and cost management report, the cost performance report captures capital and operating expense

data, managing to total project cost; however, capital and operating expense data can be segregated if desired. The report also provides useful cost and earned progress information for the current year and cumulatively as described below.

- *Current fiscal year cumulative-to-date.* The performance information includes the following.
 - The planned budget amount for each WBS reporting level element (consistent with the amount in the cost plan).
 - The earned progress amount.
 - Actuals of the work performed.
 - The cost variance indicating the difference when actuals are subtracted from earned, showing whether the work performed costs more or less than that budgeted.
 - The spend variance, a comparison of actual to planned cost spending.
- *At-completion year end.* Provides cost completion estimates and the resultant variances for the current fiscal year.
- *Total project cumulative-to-date.* Provides information on cumulative project performance, including prior and current fiscal years. The performance data mirrors that in the *Current fiscal year cumulative-to-date* bullet above.
- *At-completion total project.* Provides estimated completion costs for the entire project period of performance and the resultant variances.

Application. The Total Project Cost Performance Report applies to projects or subprojects using earned progress and is most effective for major projects and strategic systems. Earned progress is the value of work performed or accomplished relative to the total budgeted value of a task. The earned progress measurement of performance for the cost performance report is stated in terms of dollars, although it can be stated in other terms, such as man-hours, yards of fill, or gallons pumped or treated.

Reporting can be done on a quarterly basis, but monthly reporting is recommended, accompanied by trending information. The report should also be used with a schedule report, a technical and work scope progress report, and a funds management report.

Although it is developed primarily for contractor reporting to DOE, the cost performance report can also be used by the prime or integration contractor to collect cost information from other contractors as appropriate.

The cost performance report should use the WBS approach. The level of detail should be consistent with that of the cost plan. That is, if level three is used at the reporting level, the cost performance report should be consistent with level three.

The report is similar to the cost management report with the exception of earned progress information, which can provide the project manager with information on the value of work performed by the contractor. Use of simple techniques, such as physical percent complete on schedule, is advised.

Sample Analysis. Attachment 28 shows the Total Project Cost Performance Report format with instructions for completing each block in attachment 29. Attachment 30 is the report as it might look when completed. Note that the example report uses WBS level three, consistent with the cost plan example in attachment 24.

The sample shows four primary analytical elements that can be derived from the cost performance report: planned budget, earned progress, actuals, and completion estimates. Calculations using these elements produce a cost variance, spend variance, variance-at-completion, and cost performance index. The formulas are as follows.

- *Cost variance:* $\text{Cost variance} = \text{Earned} - \text{Actual}$
- *Spend variance:* $\text{Spend variance} = \text{Planned} - \text{Actual}$
- *Variance-at-completion:*
 $\text{Variance-at-completion} = \text{Planned} - \text{Estimate}$
- *Cost Performance Index (CPI):*
 $\text{CPI} = \text{Earned} \div \text{Actuals}$

Data from a cost performance report can be graphed to show trending curves and historical performance and at-completion information. Figure 7 illustrates how a planned budget,

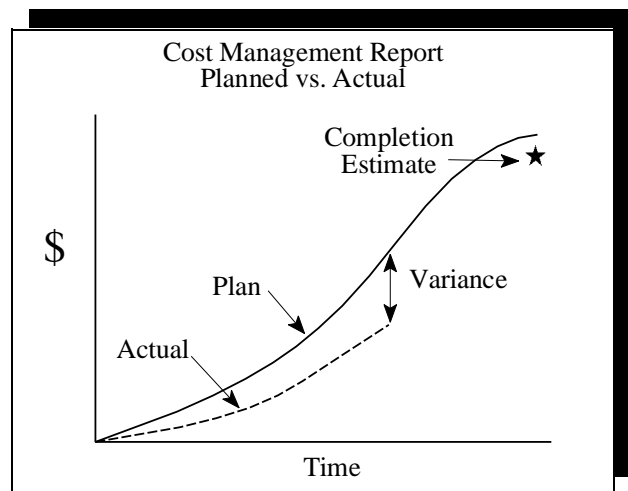


Figure 7

earned progress, and actuals may be plotted to produce variance information. The graph indicates that spending is well under-planned, but performance is behind, and the cost of work performed is higher than planned. Because the completion estimate indicates project or fiscal year completion under-planned, the contractor must recover schedule and improve cost efficiency. Further analysis of the variances should indicate the cause of each variance. In addition to graphs, the contractor should provide written analysis of the variance cause and integrate the analysis with schedule, work scope, and funds.

Figure 8 is a similar graph with an estimation of the behind schedule condition, indicating a time measure. Although an approximated behind schedule condition is obvious, the severity, cause, and location of the condition cannot be determined without further analysis.

The CPI is another analytical tool for trending contractor cost performance efficiencies. As stated above, the CPI is calculated by dividing the earned value by the actuals value. Figure 9 indicates a CPI starting at about .99 and degrading to about .92 over a 6-month period, with the largest drop in the last 2 months shown on the chart. A CPI of .92 indicates that 92 cents worth of work has been accomplished for every dollar spent. This unfavorable trend indicates developing problems.

Figure 10 compares the planned completion budget with the estimated completion cost. The planned completion budget will change to incorporate approved change control actions, and the estimated completion forecast can vary on a monthly basis. This graph indicates that initial estimates anticipated underruns.

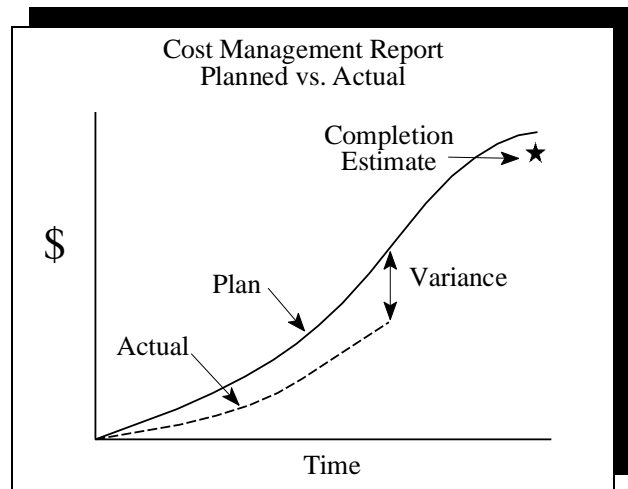


Figure 8

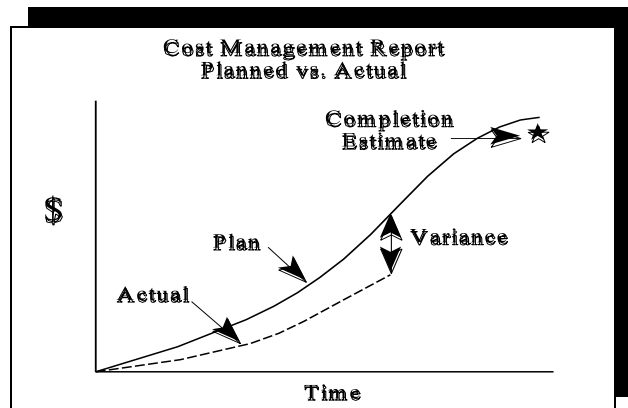


Figure 9

Approximately 25 percent of the way through the time period, a problem occurrence causes estimates to stay above baseline changes. The result is an unfavorable variance at completion.

Completion cost forecasts should be developed for all projects regardless of size or type; however, grading may apply to the method used in estimate development. In contrast, a comprehensive estimate (i.e., bottom up) and critical path schedule can be used when developing a completion estimate for a strategic system, and smaller projects such as line items or small subprojects can use an expert opinion.

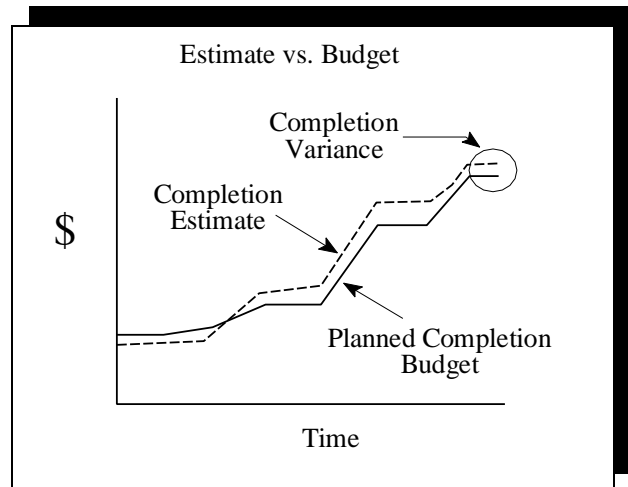


Figure 10

The completion estimate should consider the following factors.

- Unrecoverable schedule variances.
- Actual contractor performance and costs to date.
- Amount of work remaining and expected contractor performance.
- Level of risk for work remaining.
- Definitized and undefinitized scope changes.
- Potential contract claims liability.
- Overhead burdens, both actual and planned.

The completion estimate formula adds actual cost to date to an estimate of remaining work. An updated schedule should be a factor in the completion estimate calculation, considering remaining work and expected efficiencies. The DOE project manager should accept only completion estimates developed with justification by experienced contractor personnel.

2.4 Funds Reporting and Analysis

The reports in this section are designed to rapidly communicate the current and projected status of funds and funding requirements.

2.4.1 Funds Status Report

Purpose. The Funds Status Report in attachment 31 provides total project and annual perspectives of funds required for baseline execution versus funds available and comparison of both to commitment of funds. This report also clearly presents annual carryover (uncommitted funds from prior years as additional funds are available) in absolute dollar terms and in comparison to funds available versus committed. Attachments 32 and 33 contain instructions and a sample, respectively.

Application. This report can be effectively applied to virtually all projects, especially those that have multiple funding periods. The report data, which is printed in the tabular section, is readily available, and the chart format is easily developed and maintained with standard hardware.

The Funds Status Report can be used to demonstrate history, trends, or current values of carryover, deviation of funding from cost plan, and capacity to execute cost plan based on relative commitments. However, commitment of funds must be accompanied by comparable schedule performance and verification of cost plan validity. Therefore, this report should be used with the project schedule. (See Integrated Reports, section 2.6.1, Funding and Budget Impact Chart.)

Sample Analysis. The Funds Status Report in attachment 31 shows that, through the fourth project year, funds have been authorized in the amount of the cost plan, and commitments have tracked closely with the cost plan. Greater availability of funds than is required is the cumulative effect of carryover in 3 out of 4 years combined with consistent funding in the amount of the cost plan, and a small but nearly consistent annual undercommitment of funds. The peak project year is 1994 when the cost plan at \$10,900 is more than double any other year and greater than the previous 4 years combined. Therefore, the 1993 carryover of \$161,000 is less significant in 1994 than carryover in 2 out of the 3 previous years.

2.4.2 Quarterly Funds Management Report

Purpose. The Quarterly Funds Management Report in attachment 34 provides current year funding information, commitment status, and trends relative to the available funding.

This report includes projected future current year commitments so that funds are not over committed. Attachments 35 and 36 contain instructions and a sample report, respectively.

Application. This report can be applied to any project that requires funding, makes commitments against the funding, and must operate within funding constraints. The chart format is easily developed and maintained with standard hardware. The Quarterly Funds Management Report should be updated as necessary to ensure that funding will not be overcommitted. The current year trend illustrates significant changes in commitment rate (slope).

Sample Analysis. The Quarterly Funds Management Report in attachment 34 was updated in the third quarter. The \$4100 Estimate at Complete is \$161 less than the \$4261 funds available for this year, hence, the \$161 carryover. The rate of commitment increased moderately in the third quarter and is expected to remain about the same in the last quarter.

2.5 Resource Reporting And Analysis

Managing resources is similar to managing cost in that baselines are developed and actuals are compared with baselines. Units are the primary difference between resources and cost. Cost is measured in dollars. Resources can be measured in job hours, headcount, or material items. Resource information is reported by exception. Resource information is particularly important in the ramp-up and ramp-down phases of the project and when managing critical resources.

The reports provided in this section are designed to accommodate manpower-related units such as job hours, headcount, or full-time equivalents; however, other resource units can be applied to both the resource plan and the resource management report.

Resource information for project and program management is generated from the contractor's project control system in the formats and at the levels of detail needed. Resource information, particularly human resource information, can be an early indicator of impending problems but does not provide a complete picture of project status. The contractor's project control system should provide information from other components of project management (e.g., technical, cost, schedule and funds information). Integrating the various types of information helps ensure an accurate picture of project status.

DOE resource data elements are represented in the example reports and are combined for the most meaningful analysis. The resource reports formats, like those in the other Guide

sections, show how the elements are to be applied. Formats can be changed to fit project or management needs.

2.5.1 Total Project Resource Plan

Purpose. The Total Project Resource Plan is a report that documents the resource baselines for the project's entire performance period but can be used to document the following as necessary.

- Prior fiscal years.
- Current fiscal year.
- Subsequent 5 years, by year.
- Total of the remaining fiscal years.

The plan is intended to reflect total project resources regardless of funding sources and is updated each fiscal year to finalize and time phase the current year's resources. It is updated more frequently if necessary to reflect significant baseline changes.

Application. The Total Project Resource Plan can be applied whenever DOE or a contractor requires the development and maintenance of a resource baseline. The plan should be consistent with the project's cost plan. For example, when labor units of measurement are used, the amounts listed in the resource plan should convert to the labor dollar amounts in the project's cost plan, using a rate established in the project's cost estimate.

The resource plan format assumes organization of data by WBS; however, it may be appropriate to organize information by resource or organization when tracking specific project phases or work disciplines. A cost effective application of this plan and the subsequent status reports depends upon the level of detail established and the number and frequency of resources tracked. Requiring a level that is too low can increase the cost of project management and create more information than can be reasonably managed. Requiring a level that is too high can mask problems and render trending ineffective. The risk management process can help the DOE project manager determine which resources to track. (See *Risk Analysis and Management*, GPG-FM-007, for further information on development and application of a risk management process.)

Sample Analysis. Attachments 37 and 38 show the Total Project Resource Plan format with instructions. Attachment 39 shows the plan as it might look when completed for an engineering phase of the project. Data analysis is not performed since it only represents a plan and not actuals. The resource baseline is normally graphed to be compared with actual and earned data. (See section 2.5.2, Total Project Resource Management Report.)

2.5.2 Total Project Resource Management Report

Purpose. The Total Project Resource Management Report works with the resource plan in section 2.5.1, Total Project Resource Plan; planned resource amounts in the resource management report are taken directly from the resource plan. The resource management report facilitates the collection of actual resources expended, comparison of actuals with planned, and provision of estimated completion information. The report also provides useful cost information for the current year and cumulatively as described below.

- *Current fiscal year cumulative-to-date.* Provides the report user with cumulative information, focusing on the current fiscal year. Shows planned compared to actual and the calculated difference.
- *At-completion year end.* Provides resource completion estimates and the resultant variances.
- *Total project cumulative-to-date.* Provides information on all project resources to date, including prior and current fiscal years. Provides an overall or summary resource perspective.
- *At completion total project.* Provides estimated completion resources for the entire project period of performance and the resultant variances.

Application. The Total Project Resource Management Report is most effectively used to track labor associated with high risk activities or project phases, or where critical resource disciplines are a factor. Reporting can be done quarterly, but monthly reporting for limited periods is recommended, accompanied by trending information. The report should be used with the appropriate cost and schedule reports.

Sample Analysis. Attachments 40 and 41 show the Total Project Resource Management Report format and instructions. Attachment 42 is the report as it might look when completed.

The resource data from a resource management report can be graphed to establish trending curves and show historical performance and at-completion information. Figure 11 shows planned and actual resources. A positive trend is shown, resulting in a positive cumulative variance, and a positive variance at completion. The variance is calculated by subtracting actuals from planned. Variance at completion is calculated by subtracting estimated from planned. If conditions were unfavorable, either or both of the actual line and completion estimates would be shown above the plan line. A similar chart can be used for current year or the entire performance period.

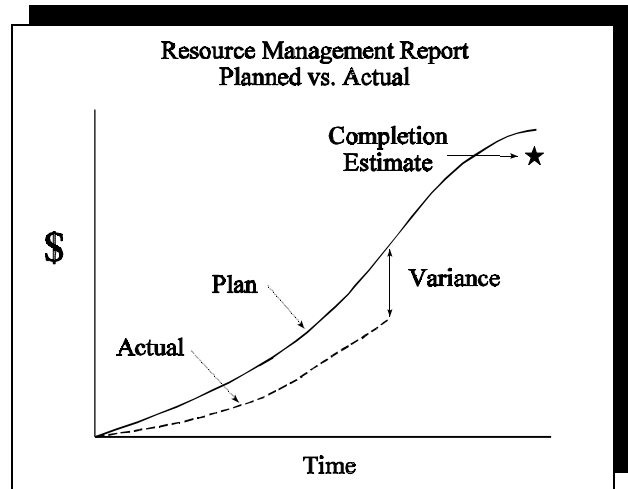


Figure 11

Further analysis of the variance should provide the variance cause. In addition to graphs, written analysis should be provided by the contractor to define the variance cause and integrate the analysis with cost, schedule, work scope, and funds.

2.6 Integrated Reports

Each integrated report contains more than one element of project control, such as cost, schedule, work scope, and funds. The purpose is to provide a comprehensive depiction of project status where trends or their effects can be seen throughout the project. For example, a typical integrated report, along with a thorough analysis, can show the impact of a behind schedule condition on a project's cost and funds. Integrated reports can also pair particular project control elements.

Much like the other reports in this Guide, integrated reports are generated from the contractor's project control system, providing the needed format and level of detail. Generally, integrated reports contain information at higher levels of the WBS. Detailed status reports tend to focus on a single project control element since the data cannot effectively be combined for quicker comprehension.

Integrated reports are generally required as part of monthly status reports provided by contractors to DOE project management. They are also provided from the DOE Field Elements to the program. The integrated reports in this section, like reports in the other

Guide sections, are formatted to describe how the elements are to be applied; the formats can be changed to fit management needs.

2.6.1 Funding and Budget Impact Chart

Purpose. The Funding and Budget Impact Chart report (attachment 43) summarizes status information about the project cost baseline, schedule baseline, and funding plan. Attachment 44 contains instructions for the report. The report provides the information listed below.

- Funding deficiency impacts.
 - Future funding requirements.
 - Project schedule impact.
 - Project cost impact.
- Historical record of planned versus actual funding.
- Historical record of obligations versus actual funding.

This format facilitates rapid assimilation and uncomplicated communication of status.

Application. This report applies to all projects. *Cost/Schedule Baseline Impact* and *Funding Impact* show the same time frame. The total project schedule, cost, and funding information should be comprehensive.

Cost/Schedule Baseline Impact Section. The bar chart should include major work elements such as level 2 WBS elements (as illustrated), and related milestones. Conventions for planned, actual, and forecast status should be included for both milestones and activity bars so that variances on the schedule can be easily discerned.

The sample format includes a cumulative budget for comparison to actual cost by fiscal period and associated variance for each period. This information, coupled with the incremental Estimate To Complete (ETC - shown for each of the remaining fiscal periods), provides cost baseline status information coincident with schedule and funding status.

The most critical total float per each prior and current fiscal period can easily be included in the table. This indicates how close the schedule is to slipping, or as in the case of the sample, how much slippage occurred in each prior fiscal period. It also provides a direct measure of the behind schedule condition in schedule units. For example, the sample shows that schedule slippage has accelerated with time, and the minus 525-day float

correlates with the one-and-a-half-year-behind schedule condition illustrated on the bar chart.

Funding Impact Section. The table correlates with the curves (i.e., each of the table elements is plotted on the chart). The cumulative funding plan directly correlates with the budget plan at completion, and both correlate with the baseline schedule.

The cumulative funding variance can be read from the table or viewed on the chart as the gap between the plan and the actual. Failure to obtain necessary funding is indicated by this element, and is often a cause of schedule slippage and increased EAC and funding requirements.

Cumulative obligations are entered and plotted for comparison with funding projections and/or actuals. The comparison indicates plan legitimacy if the actuals closely approximate projections, and if the project schedule has been honored. Obligations less than actual funding indicate carryover in the amount underobligated.

Funding impact is also entered in the table and plotted on the chart in dollars for each remaining fiscal period. This impact correlates with the incremental ETC, the forecast schedule completion, and the EAC because they all represent total project completion requirements.

Sample Analysis. The sample Funding and Budget Impact Chart report (attachment 45) shows that at the close of the third quarter of FY92, construction and Title III design were underway, although late. Schedule slippage accelerated with time; Title I was design completed on time; Title II design was completed 3 months late; both issuance of FONSI and construction commencement were 9 months late; and since construction commencement 1 year ago, the schedule completion date has slipped another 8-1/2 months. This schedule status is illustrated on the bar chart and reinforced on the upper table. It is also indicated by the length of the x-axis of the Funding Impact curve, the attendant Funding Impact row on the lower table, and the EAC and ETC rows on the upper table.

The major cause of the schedule trend and condition is probably underfunding. Actual costs have tracked with planned costs, and obligations have tracked with actual funding, which has consistently lagged behind the plan. Although actual funding is catching up to the plan, irreversible damage has occurred. The funding deficiencies have been applied to labor intensive tasks, such as engineering, construction, and management (of which FONSI is a part). Procurement, scheduled to be completed according to plan this year, appears to have been adequately funded. The one and one-half year behind schedule

condition will cost an additional \$56 million if the EAC of \$356 million (as compared to the budget plan of \$300 million) is funded according to the Funding Impact curve.

2.6.2 Total Project Status Report

Purpose. The Total Project Status Report is designed to *provide project reporting from the field to the program*. It encompasses all basic project control elements, differing from reports that are primarily dedicated to the individual elements. In addition to a basic project nomenclature, this report format accommodates the following information.

- Fiscal year and total project funds information.
- Graphic depiction of current year funds status.
- Fiscal year and total project cost information.
- Fiscal year and total project cost-at-completion information.
- Program level or critical decision milestone status.
- Project accomplishments narrative.
- Problems or issues narrative.

The report is designed to capture capital and operating expense data, managing to total project cost; however, capital and operating expense data can be segregated if desired.

The types of reports and specific reporting requirements from the field to the program should be confirmed in a memorandum of understanding at the outset of a project and modified as needed. (See *Program/Project Relationships*, GPG-FM-014, for additional information on the memorandum of understanding.)

Application. The Total Project Status Report was developed for strategic systems but can be applied to any project with program reporting requirements. Reporting is required quarterly, but it can be provided monthly. The report summarizes information to WBS level 1, the project level.

Sample Analysis. Attachments 46 and 47 show the Total Project Status Report format with instructions. Attachment 48 shows the plan as it might look when completed. The report is designed for internal use; however, all data in the project status report should be taken from the contractor's project management system and should be consistent with established cost, schedule, technical, and work scope baselines.

The report should highlight key points about project status. Analytical graphs can accompany this report, but the intent is self-contained analysis. Where problems are significant enough, additional reports might be appropriate.

2.6.3 Funds and Schedule Status Report

Purpose. The Funds and Schedule Status Report is designed to *provide project reporting from the field to the program*. It captures capital and operating expense data, managing to total project cost; however, capital and operating expense data can be segregated if desired. Features include the following items.

- Time phasing of planned versus actual funding and schedule information. The time frame includes prior years, current fiscal year by quarter, the subsequent 5 years, and any remaining years.
- Provisions to segregate funding sources, as DOE or other.
- Obligational authority versus obligations.
- Project percent complete, planned versus actual.
- Integration milestones (i.e., program-controlled milestones having an impact on project milestones).
- Project milestones, especially those affected by integration milestones.

The reports and specific reporting requirements from the field to the program should be established in a memorandum of understanding at the outset of a project. The memorandum can be modified as needs evolve. (See *Program/Project Relationships*, GPG-FM-014, for additional information on the memorandum of understanding.)

Application. The Funds and Schedule Report is an element of the Total Project Status Report developed for strategic systems. It can be applied to any project having program reporting requirements. Reporting is required quarterly but can be provided monthly. The report summarizes information to WBS level 1, the project level, paying particular attention to time phased schedule and funds information.

Sample Analysis. Attachment 49 shows the Funds and Schedule Status Report format with instructions in attachment 50. Attachment 51 shows the plan as it might look when completed.

The report is designed for internal use; however, all data should be taken from the contractor's project control system, consistent with established cost, schedule, technical, and work scope baselines. The Funds and Schedule Status Report provides status without

an accompanying narrative analysis. If explanations are necessary, they can be attached. Data can be graphed for trending and variance projections. Figure 12 is an example showing current fiscal year funds and obligation comparisons. It indicates that funding has been received for the partial fiscal year, but obligations are proceeding more slowly than planned.

Figure 13 graphs the percent complete data, comparing planned percent complete with actual. An unfavorable trend is shown in the graph, indicating a behind schedule condition. The trend indicates that schedule must be recovered to complete the project on time.

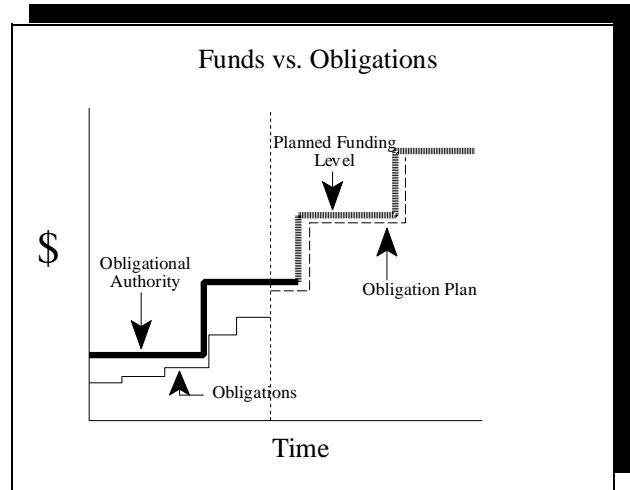


Figure 12

The milestone data in the Funds and Schedule Status Report should be depicted visually along with tabular start, complete, and forecast dates. An important feature is depiction of constraining logic. Using logic relationships, the report shows project milestones that are constrained by program-controlled milestones.

2.6.4 Project Summary Report (for General Plant Projects)

Purpose. The Project Summary Report was developed at Sandia National Laboratories to report GPP status to DOE. It is also used to report line-item status. The report provides the following.

- Time-phased capital and expense budgets.
- Project description and justification.
- Project integration and impact information.
- Major milestone data.

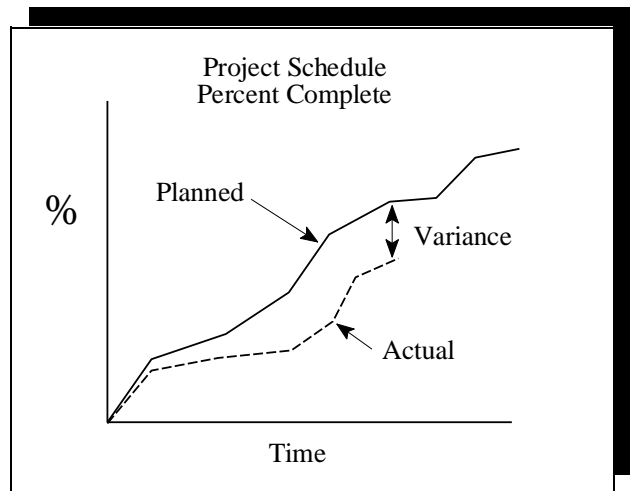


Figure 13

- Project documentation checklist.
- Capital and expense actuals and forecasts.
- Narratives concerning current status, problems, and future activities.

Application. The Project Summary Report is a monthly report. Examples shown in this section have been used to report GPPs; however, the same or modified format can be applied to larger projects where earned progress is not required. Budget, actuals, and schedule information is organized by the DOE cost breakdown structure and patterned after the project data sheet. It is not recommended for projects with WBS reporting requirements.

Sample Analysis. Attachments 52 and 53 show the Project Summary Report format and instructions. Attachment 54 shows the plan as it might look when **completed.**

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GLOSSARY

Accrued Cost. See Applied Cost.

Activity. A schedule component that contains a duration greater than zero and is assigned start and completion dates.

Actual Cost Of Work Performed (ACWP). See Applied Cost.

Actual. See Applied Costs.

Advice of Allotment. The document used to officially record allotments. It is issued to a manager for Field activities or the Chief Financial Officer of Headquarters activities. In conjunction with an Approved Funding Program, the advice of allotment establishes organizational funding limits which may not be exceeded.

Allotment. The authority delegated by the head or other authorized employee of an agency to agency employees to incur obligations within a specified amount pursuant to an OMB apportionment or reappropriation action or other statutory authority making funds available for obligations.

Applied Costs. The value (purchase price) of goods and services used, consumed, given away, lost, or destroyed by an agency of the Government within a given period of time, regardless of when ordered, received, or paid for. For operating programs, applied costs represent the value of resources consumed or used. For procurement and manufacturing programs, applied costs represent the value of material received or produced. For capital outlay programs, applied costs for public works equal the value of work put in place. In the case of appropriations for programs that are essentially operating in nature, equipment is included in costs when it is put into use.

Appropriation. Legal Authority provided by an act of Congress that permits Federal agencies to incur obligations and to make payments from the Department of Treasury for specified purposes. An appropriation usually follows enactment of authorizing legislation. An appropriation act is the most common means of providing budget authority.

Approved Funding Program. A document issued to program managers and operating activities setting forth the funds available for obligation and expenditure in each appropriation account. It specifies the funding ceilings applicable to each program, subprogram, or activity. Approved funding programs (AFPs) for operating expenses and plant and capital equipment are issued monthly.

Baseline. A formally established and controlled, quantitative/qualitative expression of planned costs, schedule, technical requirements, and work scope serving as a standard for measuring and reporting.

Budget. The target cost planned for specific work scope, or assigned to another particular purpose such as management reserve. Budget may be expressed in terms of dollars or labor units.

Budget at Completion (BAC). The sum of all budgets for a project or any element of a project such as a control account or work package.

Budget Authority (BA). Authority provided by law to enter into obligations that result in immediate or future outlays involving government funds. See DOE Order 2200.4, attachment 1 for more detailed information concerned with Budget Authority.

Budgeted Cost of Work Performed (BCWP). See Earned.

Budgeted Cost of Work Scheduled (BCWS). See Planned.

Carryover. Uncosted obligations from prior years.

Critical. In scheduled terms, total float status of zero or less, whereby such activities or milestones (to which the term applies) cannot be delayed without impacting the end date of the project that is represented by the schedule network if all other work is performed in accordance with the network model.

Critical Path. The longest paths through a Critical Path Method (CPM) schedule network that contains zero or less total float.

Critical Path Method (CPM). The industry standard method of scheduling by which activities and events (milestones) are defined and logically linked in a network, early and late start and finish dates are established, and total float is calculated.

Commitment (DISCAS). A firm administrative reservation of funds, prior to creation of an obligation. It is based upon a valid request for procurement that authorizes the creation of an obligation without further recourse to the official responsible for ensuring the availability of funds.

Commitment (Contractor). A contract award or amount or other binding legal agreement that creates a liability for a dollar amount to be paid at a later date.

Commodity. Specific quantifiable physical elements of the work scope. These might include number of items to be installed, linear distance/area/volume of material, etc.

Completion Date. The date that an activity is finished or a milestone is executed.

Consequence of Occurrence. A numerical representation in percent of the relative consequence of realizing a risk.

Contingency. An amount of project budget or funds withheld and controlled by DOE to cover costs that may result from incomplete design, unforeseen and unpredictable conditions, or uncertainties.

Contract Work Breakdown Structure. An extension of the PSWBS developed by the contractor, further planning work scope in the manner the contractor will perform the work.

Control Account. The management control point at which actual costs are accumulated and performance determined. It represents one functional organization's work, assigned as defined in one work breakdown structure element. It contains the specific work scope, schedule, budget, unique identification, and method of measuring performance.

Cost Baseline. A formally controlled budget that has been developed from the cost estimate established at approval of conceptual design; the majority of the budget has been time-phased in accordance with the project schedule. It contains direct and indirect budgets, management reserve budget, undistributed budget, and higher level budgets, contingency, and fee as appropriate.

Cost Plan. A time-phased budget plan that baselines total project cost and is based on the project cost estimate.

Cost Performance Index (CPI). An indication of the cumulative to date cost efficiency with which work has been accomplished. A CPI of 1.0 represents an on cost position. A CPI less than 1.0 represents an overrun and CPI greater than 1.0 represents an underrun. Calculation: $CPI = \text{Earned} \div \text{Actuals}$; also, $BCWP \div ACWP$.

Cost Variance (CV). The difference of actual subtracted from earned, showing at any point in time whether the work actually performed has cost more or less than that budgeted.

DISCAS (Departmental Integrated Standardized Core Accounting System). Real time accounting system used by the field offices. Data is extracted monthly for the Financial Information System (FIS).

Direct Costs. Any cost that can be specifically identified with a particular project or activity including, salaries, travel, equipment, and supplies directly benefiting the project or activity.

Earned (Earned Progress). The value of work performed or accomplished relative to the total budgeted value of a task. Both this value and the budget value can be expressed in terms of any relevant units (dollars, man-hours, gallons, tons, etc.).

Earned Value. See Earned.

Encumbrances. The uncosted balances of (1) purchase orders issued; (2) contracts and subcontracts awarded including the full liability under lease purchases and capital leases; (3) termination cost for incrementally funded firm fixed price contracts, operating lease agreements, and multi-year service contracts that contain termination clauses; (4) other legally enforceable agreements for the acquisition of goods and services not yet received; and (5) other legal liabilities. This category includes uncosted balances of work orders or authorizations issued to integrated M&O construction contractors provided such work is specific in scope and has clear milestones or tangible deliverables.

Enforceable Agreement. A legal agreement entered into by DOE and other parties that requires DOE to accomplish listed milestones. Enforceable Agreements include Federal Facility Compliance Agreements, Federal Facility Agreements, Settlement Agreements, and Consent Orders.

Estimate at Completion (EAC). The Estimate at Completion equals the actual cost incurred to date plus the estimated cost to complete all of the remaining work regardless of budget value. It can be a mathematical forecast of what it will cost to complete the planned work based on the performance indicators to date, and can be modified by consideration of expected changing, influential, future factors.

Intelligent EAC. EAC determined and influenced by judgmental and/or calculated considerations of expected changing future factors.

Linear EAC. EAC determined by a quantitative linear projection of performance to date in determination of the future component of EAC.

Fee. The profit component of contractual cost.

Forecast. A projection of technical, cost, and/or time required to complete the project or task, regardless of baseline assumptions and information.

Indirect Costs. Costs that are incurred by an organization for common or joint objectives and that cannot be identified specifically with a particular project or activity but have a causal or beneficial relationship.

Management Reserve. An amount of budget or funds optionally established and controlled by the contractor for management purposes and not designated for the accomplishment of specific tasks.

Milestone. An important or critical point in time (i.e., start/completion of an event or activity) that must occur in the project cycle to achieve the project objective(s).

Most Critical. In scheduling, the activity, event, or activity chain that has the least float relative to the remaining subject group. If the subject group or area is not critical, the Most Critical activity, event, or activity chain will have total float greater than zero.

Obligational Authority. For DOE organizations, the sum of budget authority provided for a given fiscal year, amounts authorized to be credited to a specific fund or account during that year, including transfer between funds or accounts, and unexpired, unobligated balances of amounts brought forward from previous years that remain available for obligation.

Obligations. Amounts of order placed, contracts awarded, services received, and similar transactions during a given period that will require payments during the same or a future period. Such amounts include outlays for which obligations have not been previously recorded (e.g., DOE Travel) and reflect adjustments for differences between obligations previously recorded and actual outlays to liquidate those obligations. All obligations must be supported by written documentation or law.

Other Project Cost. Non-capital and operating costs directly related to a project. Such costs may include, but are not limited to, all pre-Title I costs (including conceptual design), special studies, and all startup costs including costs of training, procedures, etc. during the transition to operations.

Organizational Breakdown Structure (OBS). A functionally oriented depiction of how a corporate entity or company is organized, showing departmental or individual relationships in a hierarchical fashion.

Outlay. The amounts of checks issued or dollars electronically transferred, interest accrued on most public debt, or other payments (by the Treasury), net of refunds and reimbursements. Federal outlays are recorded on the cash basis of accounting, with the exception of most interest on the public debt, for which the accrual basis of accounting is used.

Percent Complete. Earned Progress stated in terms of a portion of the total task or project completion value.

Performance Measurement Baseline. The total allocated budget less management reserve. It is the time phased budget plan against which contract performance is formally measured. The performance measurement baseline includes budgets assigned to control accounts and undistributed budgets.

Planned. A budget value, consistent with the cost plan, for work that is scheduled to be accomplished.

Prefinancing. Funding maintained for the purpose of ensuring continuity of contractor operations during a potential funding lapse at the beginning of the fiscal year. Prefinancing is limited to those amounts required to cover salaries and related benefits and other mandatory requirements; for example, rent and utilities, not otherwise covered in the contractor encumbrances, and approved work scope categories, for up to 20 calendar days.

Project Summary Work Breakdown Structure. The WBS defined by the DOE and tailored to project objectives.

Risk. A factor, element, constraint, or course of action on a project that introduces an uncertainty of outcome and the possibility of technical deficiencies, inadequate performance, schedule delays, or cost overruns. In the evaluation of project risk, the potential impact and the probability of occurrence must be considered.

Risk Analysis. Identification and evaluation to determine if risks exist or would be created during the execution of the project.

Risk Factor. The numerical representation of mathematical uncertainty of a risk based on the combination of the probability of occurrence and consequence of occurrence.

Remaining Duration. The duration that is expected to elapse between the status date and the completion of an activity.

Responsibility Assignment Matrix. A matrix that assigns work or management responsibility to individuals or organizations.

Schedule Baseline. The formally established and controlled schedule component of the project baseline, integral with the cost baseline, technical requirements baseline, and work scope baseline, delineating time-phased completion of project objectives and goals.

Schedule Contingency. A duration beyond the total project duration and the baseline completion date that is retained by DOE to support the schedule-oriented needs of potential in-scope changes to the project schedule baseline. Such additional required duration may have been unrecognized for specific schedule elements during establishment of the baseline when the project was less than completely defined. Schedule contingency must be accompanied by commensurate cost contingency, as any additional project time will carry an associated additional cost. The value of schedule and related cost contingency is a function of complexity and uncertainty of the component parts of the project.

Schedule Hierarchy. A vertical framework that provides for the project schedule to convey information to various levels of the organization at varying levels of detail to suit the specific needs of each of those organizational levels. The information between levels is consistent because the information in each level is directly summarized to provide the information for the higher level.

Schedule Variance. A measure of deviation from a time-oriented standard directly related to the project schedule. Examples are planned versus actual or forecast completion dates and baseline versus forecast activity durations.

Scope. See Work Scope.

Scope Baseline. The formally established and controlled, quantified and qualified physical and administrative requirements for execution of a project that are directly correlated with the cost and schedule baselines.

Spend Variance. A calculated measure of actual cost spending relative to that which was planned (planned minus actual or BCWS minus ACWP).

Target. A goal that is used as a standard for comparison. Typically, the baseline is the target for technical, schedule, and cost control.

Technical Baseline. A configuration identification document or set of specifications formally designated and approved by DOE.

Technical Status. An indication of the technical accomplishments of the reporting period and major technical problems or concerns. References approved and pending change control actions.

Threshold. A specified value (direct measure and/or percentage) that is used as a control limit to identify data elements on which the status is extraordinary. Such data elements require special review and analysis for determination of causes, potential impacts, and corrective actions.

Total Estimated Cost (TEC). Project costs, such as the costs of land and land rights; engineering, design, and inspection costs; project management costs; direct and indirect costs; contingency and escalation; and initial equipment necessary to place the plant or installation in operation.

Total Float. The amount of time by which an activity or event can be late or "slip" before it impacts the completion of the final activity in the same Critical Path Method network.

Total Project Cost (TPC). Total Estimated Cost plus all other costs identifiable and related to the project, especially Other Project Costs. Includes such activities as conceptual design and engineering, research and development, project support, design and construction, and transition to operations.

Trend. Tendency toward or general movement in a given direction over a period of time. The significance of trends relative to monitoring and reporting is that they can indicate potential future problems early enough to prevent failure and unacceptable performance.

Uncosted Obligations. Contractor encumbrances, approved work scope, prefinancing, and unencumbered funds as defined in this glossary.

Unencumbered. The remaining fund balance after subtracting contractor encumbrances, approved work scope, and prefinancing; the potential excess funding resulting from

project and program underruns and changing program withdrawal and reallocations to support current or future Departmental funding requirements.

Variance. The deviation of any element of measure from an established standard or baseline for that element of measure. A variance can be considered significant when it exceeds a threshold that exists for identification of "outlying" data elements that warrant further scrutiny.

Work Breakdown Structure (WBS). A multi-level framework that organizes and graphically displays elements representing work to be accomplished in logical relationships. The WBS may or may not be product oriented; orientation may be toward products, project phases, key decision points, or various budgeting units of measure such as activity data sheets. The WBS should be organized so each element can be estimated, scheduled, and budgeted.

WBS Element. The packaging components of the WBS.

WBS Number. A number that designates the location of an element in the WBS.

WBS Terminal Element. Each of the bottom level elements in a WBS, under which control accounts exist.

Work Scope. Translation of the technical objectives in the project baseline to specific, quantitative, and qualitative elements of the work to be accomplished. Work scope is derived from the technical objectives in the project baseline and includes steps, methods, and activities to accomplish the technical objectives.

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**ATTACHMENT 2
WORK SCOPE QUANTITY REPORT
FORM INSTRUCTIONS**

- 1. Project** **Include project number and project name. If project is sub-project to a line item, include line item number.**

- 2. Project Manager** **Place name of contractor project manager in space. If report is being prepared for use by Program Office in DOE Headquarters, place name of DOE project manager in space.**

- 3. Status Date** **Place date for which status applies in this space.**

- 4. Commodity** **Place specific, quantifiable attributes of work scope in space. These items should be meaningful and easily aggregated, and will assist in measuring work scope performance with units such as those described in number 4.**

- 5. Units** **Place unit(s) of measure for commodity in space. Examples are linear feet, number of items installed, cubic yards, gallons, etc.**

- 6. Original Baseline** **Place original, approved baseline quantity in space. This should be the quantity that is included/reflected in project cost estimate and quantity included/aggregated from Work Scope Definition Document.**

- 7. Approved Changes** **Place quantity of approved change (by appropriate authority) in space.**

- 8. Current Baseline** **Add "Original Baseline" quantity to "Approved Changes" to obtain this number.**

- 9. Completed This Period** **Place quantity installed or completed during current working period in space. Current work period could be day, week, month, quarter, etc. depending on reporting period established for project.**

- 10. Completed to Date** **Place total cumulative quantity installed or completed to date (generally, since project inception) in space.**

- 11. Remaining** **Subtract "Completed to Date" quantity from "Current Baseline" quantity to obtain this number.**

- 12. % Complete** **Calculate and place percent of completed work in space.**

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Project: Toxic Relief Park
 Project #: MRS30001
 Project Mgr. Schneider

Work Scope Quantity Report

Status Date: June 30, 1993

Commodity	Units	Original Baseline	Approved Changes	Current Baseline	Planned This Period	Completed This Period	Planned To Date	Completed To Date	Remaining	% Complete
Excavation	CY	6900		6900	1400	1070	6900	5800	1100	84%
Fill	CY	17950	990	18940	180	200	310	350	18590	2 %
Concrete	CY	9467		9467	120	90	200	120	9347	1 %
Struct Steel	LB	46000		46000					46000	0 %
Piping (<2.5")	LF	17000	-400	16600					16600	0 %
Piping (>2.5")	LF	3482		3482					3482	0 %
Elect Cable	LF	31800		31800					31800	0 %
Elect Conduit	LF	18940		18940					18940	0%
Elect Race	LF	3540		3540					3540	0 %
Design Dwgs	EACH	445		445					445	0 %
Wells	NMBR	49	15	64	3	3	9	8	56	13 %
Well Drilling	LF	1890		1890					1890	0 %
Lab Samples	EACH	16480	-500	15980	52	60	566	580	15400	4%
Op Proc'drs	EACH	67	7	74					74	0 %
Maint Prc'drs	EACH	221		221					221	0%
Startup Tests	EACH	47	3	50					50	0 %
Labor	HRS	141230	10360	151590	4060	3230	10880	12977	138613	9%

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**ATTACHMENT 4
WORK SCOPE PERFORMANCE REPORT
PERFORMANCE AS OF**

Project:

Budget:

WBS:

Actuals:

Manager:

Performance:

Problems / Issues:

Milestones:

Baseline

**Actual /
Forecast**

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**ATTACHMENT 6
WORK SCOPE PERFORMANCE REPORT
PERFORMANCE AS OF 3/31/93
(SAMPLE)**

Project:	Toxic Relief Park, MRS30001	Budget: \$2.7M
WBS:	1.2.3.2 Remediation Bench - Civil	Actuals: \$128K
Manager:	Mucksworth	

Performance:

Bench excavation continued and is on schedule with approximately 550 CY of removed to date. However, the effort began 2 weeks early, should be ahead of schedule at this time, and has decelerated significantly this past month. See Problems/Issues below for further detail.

Problems/Issues:

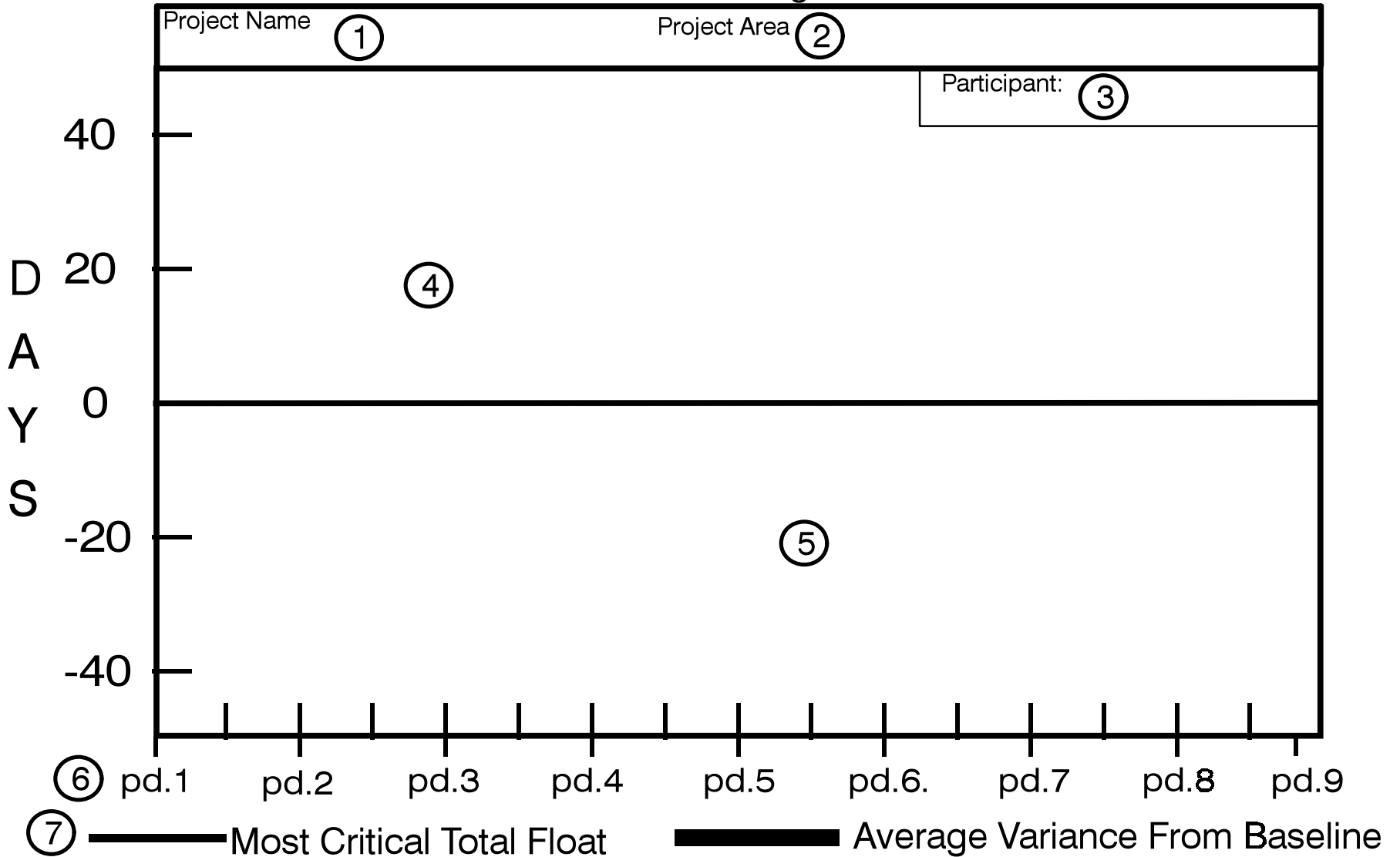
Although the site preparation effort began 2 weeks early in late February, the excavation effort is 2% behind schedule as of March 31. The significance of the behind schedule condition is the fact that it is a result of encountering mostly rock when mostly naturally compacted soil was expected. If this experience is indicative of the future, schedule and cost will be impacted. Additional core sampling and soils analyses are currently being performed to more accurately determine the quantities and locations of rock. The results of the soils analyses will be available in mid-April. We are prepared to augment our excavation and ripping efforts with drilling and blasting in early May as we expect the soils tests to justify such operations. The attached weekly *Excavation Monitor* will track our performance weekly against the benchmark remedial target that we have set for on-time completion. We will continue to monitor and report progress weekly until the potential for cost and schedule overruns is diminished. Our next monthly report will include updated cost and schedule forecasts based on soils analysis results.

<u>Milestones:</u>	Baseline	Actual / Forecast
BP2025 Compl Bench Excavation and Site Prep.....	Jun 25, 1993	Jun 25, 93 (F)
BP4035 Compl concrete (foundations & paving).....	Aug 12, 1993	Aug 12, 93 (F)
BP5055 Compl structural steel erection.....	Oct 23, 1993	Oct 23, 93 (F)

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Attachment 7: Schedule Trends Curves

Most Critical Total Float & Average Variance Trends



Site (8)	Report Pd (9)		
Baseline Date (10)	Start Date (11)	Complete Date (12)	Signature (13)

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**ATTACHMENT 8
SCHEDULE TRENDS CURVES
FORM INSTRUCTIONS**

- | <u>Item</u> | <u>Instructions</u> |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Enter project title as it is listed in official funding documentation. |
| 2. | Enter specific project area, system, or other package component about which this report is oriented. |
| 3. | Identify individual or organization (as appropriate) responsible for effective work performance in subject area. |
| 4. | Enter and plot for each reporting period: Most Critical Total Float (MCTF) as derived from CPM network schedule calculations for subject area. MCTF is the lowest total float of all scheduled activities in subject area. |
| 5. | Enter and plot for each reporting period: Average Variance from target for all of activities in subject area based on CPM network schedule calculations. The schedule "Target" is the standard against which schedule progress is measured for assessment of schedule performance, and is usually the baseline schedule. Average variance is the numerical average of all individual activity forecast from target (target completion date - forecast completion date) variances in the subject area. |
| 6. | Enter relevant time segments (i.e., weeks or months) on the date ribbon. |
| 7. | Describe the plotting conventions in a legend. |
| 8. | Enter the location of the managing site and project if different from managing site. |
| 9. | Enter period(s) represented by this report. |
| 10. | Enter official date of most recently approved baseline. |
| 11 . | Enter baseline start date of project. |
| 12. | Enter baseline completion date of project. |
| 13. | Enter signature of project manager for contractor or integrating contractor that is primarily responsible for report information and integrity. |

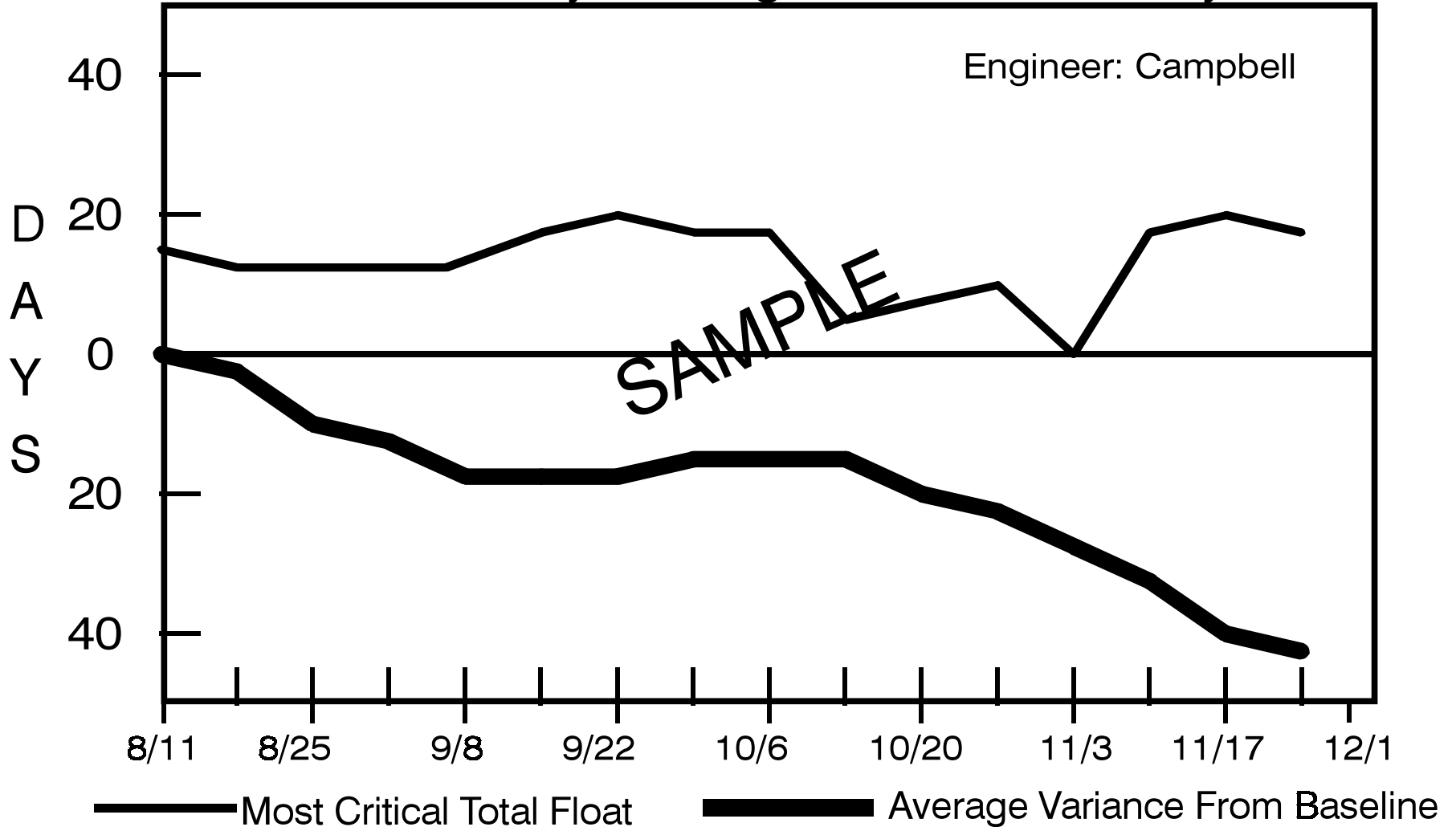
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Attachment 9: Schedule Trends Curves

Most Critical Total Float & Average Variance Trends

Demilitarization Project: Agent Quantification System

Engineer: Campbell



Site			Report Pd	
Baseline Date	Start Date	Complete Date	Signature	

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Attachment 10: Barchart Schedule And Earned Progress Charts

Project Title ①		Project Area ②			Site ③				
Report Pd ④	Participant ⑤		Baseline Date ⑥	Start Date ⑦	Complete Date ⑧	Signature ⑨			
Activity Description	%EP	TF	RD	Month ⑩	Month 2	Month 3	Month 4	Month 5	Month 6
<div style="position: absolute; top: 10%; left: 10%; width: 80%; height: 80%; border: 1px solid black; border-radius: 50%; text-align: center; line-height: 100px;"> ⑪ ⑪A </div>	⑪B	⑪C	⑪D	⑪E					

Work Category Earned Progress		Per ⑬B Complete
Work Category ⑬	⑬A	
<div style="position: absolute; top: 10%; left: 10%; width: 80%; height: 80%; border: 1px solid black; border-radius: 50%; text-align: center; line-height: 100px;"> ⑬A ⑬C </div>	⑬C	
Total	⑬D	
Planned progress ▼	⑬E	

100										
90										Planned ⑬B
80										Earned
70										Forecast
60										⑬C
50										
40										⑬C
30										
20										
10										

⑬ Summary Earned Progress Chart

INSBCEPPRS

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**ATTACHMENT 11
BAR CHART SCHEDULE AND EARNED PROGRESS CHARTS
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
1.	Enter project title as listed in official funding documentation.		value of work accomplished relative to baseline value for the work contained in the activity stated in terms of percent complete. This value is determined by responsible individual(s).
2.	Enter specific project area, system, or other package component about which this report is oriented.		
3.	Enter location of managing site and project if different from managing site.	11C.	Enter Total Float: the number of schedule time units (i.e., work days) beyond which delay of the activity would impact schedule completion activity. This value is derived from critical path method (CPM) network schedule calculations.
4.	Enter period(s) represented by this report.		
5.	Enter name of contractor or integrating contractor primarily responsible for report information and integrity.	11D.	Enter Remaining Duration; that is, the estimated duration between status date and activity completion date in schedule time units. This value is determined by responsible individual.
6.	Enter official date of most recently approved baseline.	11E.	Present following information graphically on bar chart consistent with appropriate time period column(s):
7.	Enter baseline start date of project.		<ul style="list-style-type: none"> • Actual start and completion of each activity. • Forecast start and completion of each activity. • The baseline duration of each activity. • Baseline progress earned - the point in time where the current value of earned progress (EP) exists on baseline plan for each activity. If current Earned Progress = progress planned to be achieved 2 months ago, the
8.	Enter baseline completion date of project.		
9.	Enter signature of project manager for contractor or integrating contractor primarily responsible for report information and integrity.		
10.	Enter relevant time segments (i.e, months) on date ribbon.		
11.	Bar Chart: Establish and maintain following display of information. Any alternative conventions that clearly and conspicuously display subject information are acceptable.		
11A.	Describe each scheduled activity.		
11B.	Enter Percent Earned Progress (EP: Budgeted Cost of Work Performed (BCWP), which is the		

**ATTACHMENT 11
BAR CHART SCHEDULE AND EARNED PROGRESS CHARTS
FORM INSTRUCTIONS**

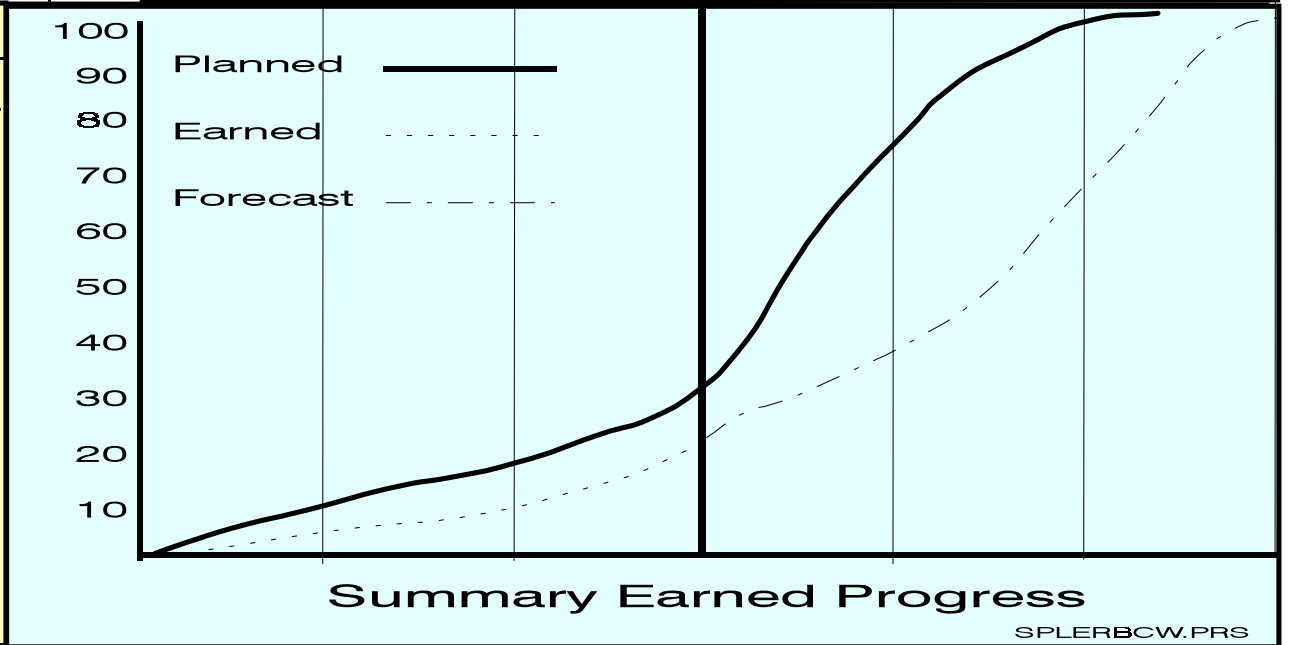
<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
	<p>"baseline progress earned indicator" (which could be bar shading) should point to 2 months ago.</p> <ul style="list-style-type: none"> • Highlight critical (zero float) activities. "Subcritical" activities (those with >0, but significantly small float) may also be highlighted although they must be differentiated from critical activities. • Activity discontinuity. • Forecast and/or actual duration beyond baseline plan. • Clearly depict status date. 		<p>monitors and clearly displays significant component work categories. The user is encouraged to monitor a comprehensive set of work categories. Any conventions that clearly and conspicuously display the following subject information may be applied:</p>
		13A.	Enter description of each significant work category that warrants monitoring.
		13B.	Establish and maintain percent scale.
		13C.	Demonstrate baseline plan cumulative earned progress through current status date for each work category. *AND*
12.	<u>Summary Earned Progress Chart:</u> Establish and maintain composite cumulative EP curves for activities represented on bar chart above, on same time scale. Plot EP against baseline plan progress and extend earned progress curve beyond status date indicator to demonstrate forecast earned progress. Include conventions to demonstrate the following:		Demonstrate actual cumulative earned progress through current status date for each work category and clearly contrast with baseline planned earned progress.
12A.	Establish and maintain percent scale.	13D.	Demonstrate composite earned progress status for all work categories above. This should equal cumulative composite earned progress in item #12 for scheduled activities if work categories are comprehensive (which is recommended).
12B.	Establish and maintain an accurate legend	13E.	Establish and maintain an accurate and simple legend
12C.	Plot cumulative baseline plan, earned, and forecast curves.		
13.	<u>Optional Earned Progress Chart:</u> Establish and maintain a cumulative earned progress status indicator that		General note: Include a single or multiple legend(s) that clearly describe all conventions utilized in the bar chart, summary EP chart, and work category EP indicator.

Attachment 12: Sample Barchart Schedule And Earned Progress Charts

Project Title		Project Area			Site				
Report Pd	Participant	Baseline Date	Start Date	Complete Date	Signature				
	%EP	TF	RD	Jul	Aug	Sep	Oct	Nov	Dec
Activity description	100			◆————◆					
Activity description	85	17	8		◆————◆		◆		
Activity description	100			◆————◆					
Activity description		3	4		◆————◆		◆		
Activity description	14	0	38			◆	◆		
Activity description	42	0	32			◆	◆		
Activity description		0	32				◆		◆
Activity description		18	12					◆	

SAMPLE

Work Category Earned Progress	
Work Category	Percent complete
	10 20 30 40 50 60 70 80 90
Core Drilling	▼
Analysis	▼
Excavation	▼
Remediation	▼
Backfill	
Vegetation	
Total	
Planned progress	▼
Progress to date	▼



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Attachment 13: Milestone Schedule With Earned Progress

Project Title 1		Project Area 2			Site 3										
Report Pd 4	Participant 5	Baseline Date 6	Start Date 7	Complete Date 8	Signature 9										
M/S Description	Completion Date		TF	Month 10	Month 2	Month 3	Month 4	Month 5	Month 6						
	Planned	Current													
11 11A				11E											
Work Category Earned Progress <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Work Category</th> <th>Per 13B Complete</th> </tr> <tr> <td style="height: 100px; vertical-align: top;">13A</td> <td style="text-align: center;">13C</td> </tr> <tr> <td>Total</td> <td style="text-align: center;">13D</td> </tr> </table>				Work Category	Per 13B Complete	13A	13C	Total	13D	<p style="text-align: center;">12 Summary Earned Progress Chart</p>					
Work Category	Per 13B Complete														
13A	13C														
Total	13D														

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**ATTACHMENT 14
MILESTONE SCHEDULE AND EARNED PROGRESS CHARTS
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
1.	Enter project title as listed in official funding documentation.	11A.	Describe each schedule milestone.
2.	Enter specific project area, system, or other package component about which report is oriented.	11B.	Enter baseline milestone completion date.
3.	Enter location of managing site. Additionally, include location of project if different from managing site.	11C.	Enter current forecast milestone completion date.
4.	Enter period(s) represented by this report.	11D.	Enter Total Float: the number of schedule time units (i.e., work days) beyond which delay of the milestone would impact schedule completion milestone. This value is derived from CPM network schedule calculations.
5.	Enter name of contractor or integrating contractor primarily responsible for report information and integrity.	11E.	Present the following information graphically on the bar chart consistent with appropriate time period column(s). <ul style="list-style-type: none"> • Baseline completion date of each milestone. • Actual completion date of each milestone. • Forecast completion date of each milestone. • Highlight critical (zero float) milestones. "Subcritical" milestones (those with >0, but significantly small float) may also be highlighted although they must be differentiated from critical milestones. • Clearly depict status date.
6.	Enter official date of most recently approved baseline.		
7.	Enter baseline start date of project.		
8.	Enter baseline completion date of project.		
9.	Enter signature of project manager for contractor or integrating contractor primarily responsible for report information and integrity.		
10.	Enter relevant time segments (i.e., months) on date ribbon.		
11.	<u>Milestone Schedule:</u> Establish and maintain following display of information. Any alternative conventions that clearly and conspicuously display subject information are acceptable:	12.	<u>Summary Earned Progress Chart:</u> Establish and maintain composite cumulative Earned Progress (EP)

Figure 3.2-8

curves for milestones represented on the bar chart above, on the same time scale. Plot earned progress against baseline plan progress and extend earned progress curve beyond status date indicator to demonstrate forecast earned progress. Include conventions to demonstrate the following.

- 12A. Establish and maintain percent scale.
- 12B. Establish and maintain an accurate legend
- 12C. Plot cumulative baseline plan, earned, and forecast curves.
- 13. **Optional Earned Progress Chart:** Establish and maintain a cumulative earned progress status indicator that monitors and clearly displays significant component work categories. The user is encouraged to monitor a comprehensive set of work categories. Any conventions that clearly and conspicuously display the following subject information may be applied.

- 13A. Describe each monitored work category.

- 13B. Establish and maintain percent scale.

- 13C. Demonstrate baseline plan cumulative earned progress through current status date for each work category.

AND

Demonstrate actual cumulative earned progress through current status date for each work category.

- 13D. Demonstrate composite earned progress status for all work categories above. This should equal cumulative composite earned progress in item 12 for scheduled milestones if work categories are comprehensive (which is recommended).

- 13E. Establish and maintain an accurate legend.

General note: Include a single or multiple legend(s) that clearly describe all conventions used in the bar chart, summary earned progress chart, and work category earned progress indicator.

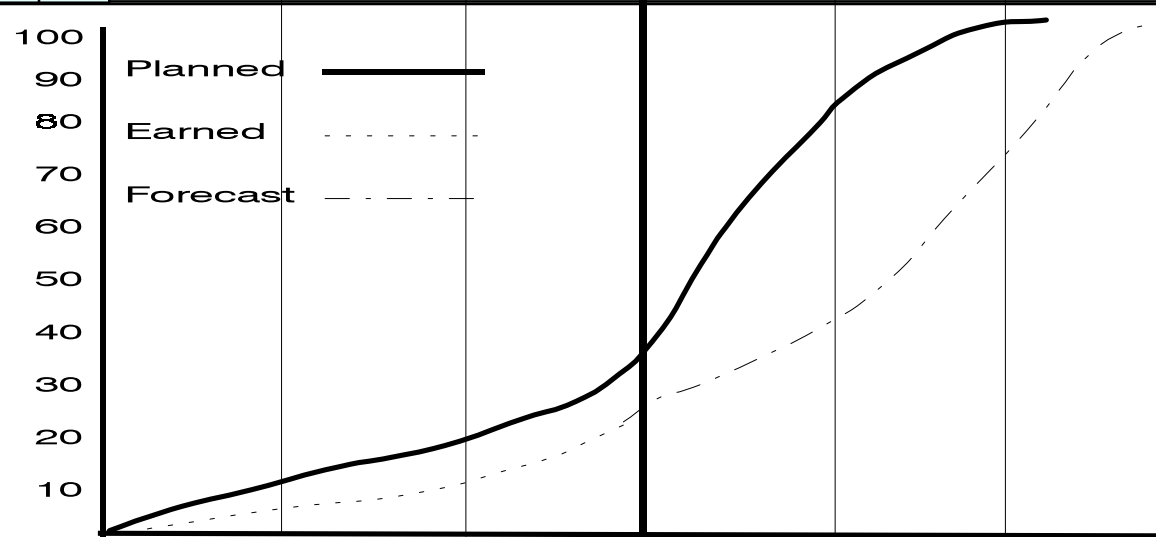
Attachment 15: Sample Milestone Schedule And Earned Progress Charts

Project Title		Project Area			Site				
Report Pd	Participant		Baseline Date	Start Date	Complete Date	Signature			
M/S Description	Completion Date Planned	Current	TF	Jul	Aug	Sep	Oct	Nov	Dec
M/S description	07/29/94	08/20/94			◇	◆			
M/S description	10/07/95	10/16/94	17				◇	◆	
M/S description	09/05/95	08/26/94			◆	◇			
M/S description	09/24/94	10/15/94	22			◇	◆		
M/S description	11/28/94	SAME	0					◆	
M/S description	10/14/94	10/28/94	0				◆	◆	
M/S description	12/03/94	12/31/94	0						◆
M/S description	12/12/94	12/19/94	18						◇

SAMPLE

Work Category Earned Progress	
Work Category	Percent complete
	10 20 30 40 50 60 70 80 90
Core Drilling	Progress to date: ~65%
Analysis	Progress to date: ~55%
Excavation	Progress to date: ~35%
Remediat'n	Progress to date: ~15%
Backfill	Progress to date: ~10%
Vegetation	Progress to date: ~5%
Total	Progress to date: ~25%

Planned progress: Progress to date:



Summary Earned Progress

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Attachment 16: Activity Trend Exception Table

Project Title ①		Project Area ②				Site ③				
Report Pd ④	Participant ⑤		Baseline Date ⑥	Start Date ⑦	Complete Date ⑧	Signature ⑨				
Activity Description ⑩	Compl Date		Durations			Compl Date Var ⑬	Total Float			Ttl Float Var ⑭
	Plan ⑪	Curr F'cast ⑫	Plan ⑬	Curr Ttl ⑭	Rem ⑮		Plan ⑯	2 Prior pds ⑰A	Last pd ⑰B	

- ⑳ Thresholds:
 Float Trend -
 Completion Date Variance -
 Total Float Variance -

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**ATTACHMENT 17
ACTIVITY TREND EXCEPTION TABLE
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
1.	Enter attachment project title as listed in official funding documentation.	11.	Enter baseline schedule completion date.
2.	Enter attachment specific project area, system, or other package component about which this report is oriented.	12.	Enter current forecast schedule completion date.
3.	Enter attachment location of attachment managing site. Additionally, include attachment location of attachment project if different from attachment managing site.	13.	Enter activity duration in baseline plan.
4.	Enter attachment period(s) that is represented by this report.	14.	Enter activity duration in current forecast schedule. This duration includes actual duration that has occurred to date plus remaining duration.
5.	Enter attachment name of attachment contractor or integrating contractor primarily responsible for attachment report information and integrity.	15.	Enter estimated remaining duration from schedule update process.
6.	Enter attachment official date of attachment most recently approved baseline.	16.	Enter Completion Date Variance (CDV); that is, the number of schedule period units (usually days) by which the activity completion has or will deviate from baseline completion date (baseline completion date - current forecast completion date). Highlight CDV if it exceeds pre-established threshold.
7.	Enter baseline start date of project.	17.	Enter Total Float (TF) on the activity in the baseline plan.
8.	Enter baseline completion date of project.	18.	Enter TF for each of the three most recent reporting periods (the current period and each of the two prior periods) as discussed in 18A, 18B, and 18C below. If Float Trend for these three periods violates pre-established threshold (defined in item 20 below), highlight the three component TF values. These three float values listed together
9.	Enter signature of project manager for contractor or integrating contractor primarily responsible for report information and integrity.		
10.	Describe schedule activities that violate completion date variance threshold(s) and/or total float trend threshold(s) as described below in items 16, 18, and 20.		

**ATTACHMENT 17
ACTIVITY TREND EXCEPTION TABLE
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
	indicate the recent float degradation trend.		
18A.	Enter activity total float from second prior reporting period.	19.	Enter Total Float Variance (TFV): the number of schedule periods (usually days) by which current forecast schedule for activity deviates from baseline schedule for activity.
18B.	Enter total float on activity from reporting period prior to current reporting period.	20.	Clearly define Float Trend and Completion Date Variance thresholds; that is, the level(s) at which an activity qualifies and is required to be included on this report.
18C.	Enter total float on activity in current forecast schedule.		

Attachment 8: Sample Activity Trend Exception Table

Project Title		Project Area				Site					
Report Pd	Participant		Baseline Date		Start Date	Complete Date	Signature				
Activity Description	Compl Date		Durations			Compl Date Var	Total Float			Ttl Float Var	
	Plan	Curr F'cast	Plan	Curr Ttl	Rem		Plan	2 Prior pds	Last pd		Curr pd
Activity Description 1	12/18/94	02/26/95	32	45	45	-70	86	74	65	53	-33
Activity Description 2	11/03/94	11/21/94	27	42	37	-18	57	48	40	32	-25
Activity Description 3	02/15/95	03/01/95	17	17	17	-14	52	44	30	22	-30
Activity Description 4	10/12/94	11/11/94	22	50	30	-30	26	20	15	18	-08
Activity Description 5											
Activity Description 6											
Activity Description 7											

Thresholds:

Float Trend - 3 consecutive 10% or greater losses

Completion Date Variance - Greater than 20 days

Ttl Float Var - less than -20 days variance

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Attachment 19: Milestone Trend Exception Table

Project Title (1)		Project Area (2)			Site (3)		
Report Pd (4)	Participant (5)	Baseline Date (6)	Start Date (7)	Complete Date (8)	Signature (9)		
Milestone Description (10)	Compl Date		Compl Date Var (13)	Total Float			Ttl Float Var (16)
	Plan (11)	Curr F'cast (12)		Plan (14)	2 Prior pds (15A)	Last pd (15B)	

- (17) Thresholds:
 Float Trend -
 Completion Date Variance -
 Total Float Variance -

15

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**ATTACHMENT 20
MILESTONE TREND EXCEPTION TABLE
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
1.	Enter project title as listed in official funding documentation.	12.	Enter current forecast schedule completion date for each milestone.
2.	Enter specific project area, system, or other package component about which this report is oriented.	13.	Enter Completion Date Variance (CDV); that is, the number of schedule period units (usually days) by which milestone completion has or will deviate from baseline completion date (baseline completion date - current forecast completion date).
3.	Enter location of managing site and location of project if different from managing site.		Highlight CDV if it exceeds pre-established threshold.
4.	Enter period(s) represented by this report.	14.	Enter Total Float (TF) on milestone in baseline plan.
5.	Enter name of contractor or integrating contractor primarily responsible for report information and integrity.	15.	Enter milestone TF for each of the three most recent reporting periods (the current period and each of the two prior periods) as discussed in 15A, 15B, and 15C below.
6.	Enter official date of most recently approved baseline.		If Float Trend for these three periods violates pre-established threshold (defined in item 17 below), highlight the three component TF values.
7.	Enter baseline start date of project.	15A.	Enter milestone total float from the second prior reporting period.
8.	Enter baseline completion date of project.	15B.	Enter total float on milestone from reporting period prior to current reporting period.
9.	Enter signature of project manager for contractor or integrating contractor primarily responsible for report information and integrity.	15C.	Enter total float on milestone in current forecast schedule.
10.	Enter descriptions of schedule milestones that violate completion date variance threshold(s) and/or total float trend threshold(s) as described below in items 13, 15, and 17.	16.	Enter Total Float Variance (TFV); that is, the number of schedule periods (usually days) by which the current
11.	Enter baseline schedule completion date for each milestone.		

Figure 3.2-14

**ATTACHMENT 20
MILESTONE TREND EXCEPTION TABLE
FORM INSTRUCTIONS**

Item Instructions

forecast schedule for the milestone deviates from baseline schedule for the milestone.

Item Instructions

17. Clearly define Float Trend and Completion Date Variance thresholds; that is, the level(s) at which a milestone is included on this report.

Attachment 21: Sample Milestone Trend Exception Table

Project Title		Project Area			Site			
Report Pd	Participant	Baseline Date	Start Date	Complete Date	Signature			
Activity Description	Compl Date		Compl Date Var	Plan	Total Float			Ttl Float Var
	Plan	Curr F'cast			2 Prior pds	Last pd	Curr pd	
Milestone Description 1	12/18/94	02/26/95	-70	86	74	65	53	-33
Milestone Description 2	11/03/94	11/21/94	-18	57	48	40	32	-25
Milestone Description 3	02/15/95	03/01/95	-14	52	44	30	22	-30
Milestone Description 4	10/12/94	11/17/94	-30	26	20	15	18	-08
Milestone Description 5								
Milestone Description 6								
Milestone Description 7								

Thresholds:

Float Trend - 3 consecutive 10% or greater losses

Completion Date Variance - Greater than 20 days

Total Float Variance - Less than -20 days

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Attachment 22: Total Project Cost Plan

Project Title ①				Current Fiscal Year ②				Site ③															
Reported By ④				Cost Plan Date ⑤				Start Date ⑥															
								Completion Date ⑦															
WBS Element	Actuals (Prior Fiscal Years)	Current Fiscal Year													5 Year Plan				Plan Remain Fiscal Years	Total			
		O	N	D	J	F	M	A	M	J	J	A	S	Total	⑫								
⑧	⑨	⑩													⑪	⑬						⑭	⑮
Management Reserve														⑯	⑰						⑱	⑲	
Contingency														⑳	㉑						㉒	㉓	
Fee Available	㉔														㉕	㉖						㉗	㉘
Total Project Plan	㉙														㉚	㉛						㉜	㉝
Dollars Expended In: ⑳	Approved: Participant Project Manager Signature and Date ㉞										Approved: DOE Project Manager Signature and Date ㉟												

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**ATTACHMENT 23
TOTAL PROJECT COST PLAN
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	Enter project title as it is listed in official funding documentation. This format can be used as a cost plan for any project or subproject as appropriate.		Enter each month's or quarter's budget amount in appropriate column. These amounts, when approved (see Items 35 and 36), equal contractor's performance measurement baseline for current fiscal year.
2.	Enter fiscal year which corresponds to monthly budget data that begins in item 10.	11.	Enter total of 12-month budget.
3.	Enter location of managing site and project if different from managing site.	12.	Enter the next 5 fiscal years that are subsequent to current fiscal year shown in item 2.
4.	Enter name of contractor or integrating contractor primarily responsible for data in plan.	13.	Enter planned budget amount for each fiscal year in 5-Year Plan section, by WBS element.
5.	Enter effective date of cost plan.	14.	Enter planned budget for any project years remaining beyond 5-Year Plan.
6.	Enter baselined start date of project.	15.	Enter total of items 9, 11, 13 (all 5 years), and 14 for each WBS element. This equals performance measurement baseline for total project.
7.	Enter baselined completion date of project.	16.	Enter management reserve amount budgeted for current fiscal year. Capital and operating management reserve budget may be segregated as a data option.
8.	Enter appropriate WBS element number and title consistent with requisite reporting level. This column may also be used to subtotal budgets as appropriate, and identify fund type; i.e., operating and capital.	17.	Enter management reserve amount planned for each of the 5 years subsequent to current fiscal year.
9.	Enter the cumulative actuals for fiscal year(s) prior to current fiscal year for each WBS element in item 8.	18.	Enter management reserve amount planned for remainder of project effort beyond the 5 Year Plan period.
10.	Spread budget amount for current fiscal year over a 12-month period, consistent with the way work will be performed, for each WBS element in item 8. Quarterly periods may also be used depending upon project planning and reporting requirements.	19.	Enter total of items 16, 17 (all 5 years), and 18.

20. Enter contingency amount budgeted for current fiscal year. Capital and operating contingency budget may be segregated as a data option.
21. Enter contingency amount planned for each of the 5 years subsequent to current fiscal year.
22. Enter contingency amount planned for remainder of project effort beyond the 5 Year Plan period.
23. Enter the total of items 20, 21 (all 5 years), and 22.
24. Enter amount of fee paid in prior fiscal years. Leave this item blank when calculation of fee does not apply; for example, calculation of fee might not be appropriate at subproject level.
25. Enter amount of fee available for current fiscal year. Amounts of fee available shown on this plan do not guarantee award.
26. Enter amount fee available for each of the 5 years subsequent to current fiscal year.
27. Enter amount of fee available for remainder of the project effort beyond the 5 Year Plan period.
28. Enter total of items 24, 25, 26 (all 5 years), and 27.
29. Enter total of each column represented by items 9 and 10. This amount equals all project expenditures prior to current fiscal year.
30. Enter total of items 11, 16, 20, and 25. This amount equals current fiscal year budget.
31. Enter total of items 13, 17, 21, and 26 for each year in 5 Year Plan.
32. Enter total of items 14, 18, 22 and 27.
33. Enter total of items 15, 19, 23 and 28. This amount, plus any approved changes, equals planned total project cost.
34. Enter unit of measure for dollar amounts shown on this form (exact, hundreds, thousands, etc.).
35. Signature of participant project manager and date signed, verifying validity of data furnished.
36. Signature of DOE project manager and date signed, indicating acceptance of data presented as project cost baseline. The Total Project Cost Plan, plus any approved changes, is project's cost baseline.

**ATTACHMENT 24
TOTAL PROJECT COST PLAN
(SAMPLE)**

Total Project Cost Plan																																												
Project Title					Energistic Pilot Unit										Current Fiscal Year					1993										Site					Mile High Plant									
Prepared By					Acme Contractors One Construction Place Anyplace, USA 12345										Cost Plan Date					10-1-91 Revised 10-1-92										Start Date					10-1-91									
																														Completion Date					6-15-95									
Element	Plan (Prior Fiscal Years)	Current Fiscal Year													5 Year Plan					Plan Remain Fiscal Years																								
		O	N	D	J	F	M	A	M	J	J	A	S	Total	94	95																												
1.1	2601	473	491	491	491	491	491	210	208	207	209	207	207	4176	1196	400																												
1.2	11	2	2	2	2	2	3	6	8	9	14	16	17	83	117	27																												
1.3	3873	517	526	526	526	526	525	223	223	212	205	200	199	4407	2084	488																												
1.4	1564	119	207	207	208	207	207	234	234	245	245	250	250	2613	1105	314																												
Subtotal	8048	1111	1226	1226	1226	1226	1226	673	673	673	673	673	673	11279	4502	1256																												
Management Reserve														1127	450	125																												
Contingency														563	200	85																												
Available	482														676	243	75																											
Project Plan	8530	1111	1226	1226	1226	1226	1226	673	673	673	673	673	673	13645	5395	1541																												
Costs Expressed In	Approved: Participant Project Manager Signature and Date										Approved: DOE Project Manager Signature and Date																																	
in Thousands																																												

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**ATTACHMENT 26
TOTAL PROJECT COST MANAGEMENT REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	Enter project title as listed in official funding documentation. This format can be used to report status of projects, subprojects, or lower level WBS elements within projects as necessary.		segregate management of funding types if desired.
2.	Enter fiscal periods(s) consistent with data represented in this report. This report may serve as monthly or quarterly report.	10.	Enter planned budget amount (cumulative for current fiscal year) through reporting period shown in block 2 consistent with appropriate WBS element.
3.	Enter location of managing site and location of project if different from managing site.	11.	Enter actuals (cumulative for current fiscal year) through reporting period shown in block 2 consistent with appropriate WBS element.
4.	Enter name of contractor or integrating contractor primarily responsible for data in report.	12.	Enter difference between columns 10 and 11.
5.	Enter date of most recently approved cost plan.	13.	Enter baselined budget amount (consistent with cost plan) that represents entire current fiscal year for appropriate WBS element.
6.	Enter baselined start date of project.	14.	Enter estimated budget requirement needed to perform baselined work for entire current fiscal year for appropriate WBS element.
7.	Enter signature of contractor project manager or integrating contractor primarily responsible for data in report. When report is submitted as part of a periodic status report or under a letter of transmittal, signature is not necessary.	15.	Enter difference between columns 13 and 14.
8.	Enter baselined completion date of project in accordance with most recently approved cost plan.	16.	Enter cumulative-to-date, planned budget amount (consistent with cost plan) that represents all reporting periods through period reflected in item 2 for appropriate WBS element.
9.	Enter appropriate reporting level WBS element number and title. Include elements of both capital and operating funded work scope as appropriate. Separate cost management reports may be used to	17.	Enter cumulative-to-date actuals that represent all reporting periods through period reflected in item 2 for appropriate WBS element.
		18.	Enter difference between columns 16 and 17.

19. Enter baselined budget amount (consistent with cost plan) that represents entire project period of performance for appropriate WBS element.
20. Enter estimated budget requirement needed to perform baselined work for entire project period of performance for appropriate WBS element.
21. Enter difference between columns 19 and 20.
22. Enter subtotals for each of columns 10 through 21. Additional subtotals may be added to segregate capital and operating budgets as a data option.
- 23/24. Intentionally left blank. These rows can be used when adding data options to form.
25. Enter amount of management reserve budget for current fiscal year. Capital and operating management reserve may be segregated as a data option.
26. Enter amount of management reserve expected to remain at end of current fiscal year. Entering zero indicates all available management reserve will be used.
27. Enter difference between cells 25 and 26.
28. Enter amount of management reserve budget planned for total project.
29. Enter amount of management reserve budget expected to remain at end of project.
30. Enter difference between cells 28 and 29.
31. Enter amount of contingency for current fiscal year. Capital and operating contingency may be segregated as a data option.
32. Enter amount of contingency expected to remain at end of current fiscal year. Entering indicates all available contingency will be used.
33. Enter difference between cells 31 and 32.
34. Enter amount of contingency planned for total project.
35. Enter amount of contingency expected to remain at end of project.
36. Enter difference between cells 38 and 39.
37. Intentionally left blank. This row can be used when adding data options to form.
38. Enter totals for each of columns 10 through 21. Totals consist of the following: budget subtotals (from item 22), management reserve, and contingency.

Attachment 27: Sample Total Project Cost Management Report

Project Title				Reporting Period				Site				
Energistic Pilot Unit				October 1992				Mile High Plant				
Reported By				Cost Plan Date				Start Date				
Acme Contractors				10-1-92				10-1-91				
Signature								Completion Date				
								6-15-95				
WBS Element	Current Fiscal Year Cumulative-to-Date			At Completion Year End			Total Project Cumulative To Date			At Completion Total Project		
	Planned	Actual	Spend Variance	Plan	Estimate	Variance	Planned	Actual	Spend Variance	Plan	Estimate	Variance
1.1	473	468	5	4176	4158	18	2950	3069	-119	8249	8305	-56
1.2	2	2	0	83	83	0	14	13	1	239	239	0
1.3	517	524	-7	4407	4395	12	4134	4369	-235	10596	10642	-46
1.4	119	122	-3	2613	2605	8	1641	1685	-44	5581	5612	-31
Subtotal	1111	1116	-5	11279	11241	38	8739	9136	394	24665	24798	-133
Management Reserve				1127	1127	0				1702	1702	0
Contingency				563	563	0				848	848	0
Total	1111	1116	-5	12969	12931	38	8739	9136	394	27215	27348	-133

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Attachment 28: Total Project Cost Performance Report

Project Title 1					Reporting Period 2					Site 3						
Reported By 4					Cost Plan Date 5					Start Date 6						
Signature 7										Completion Date 8						
WBS Element	Current Fiscal Year Cumulative-to-Date					At-Completion Year End			Total Project Cumulative-to-Date					At Completion Total Project		
	Planned	Earned	Actual	Cost Variance	Spend Variance	Plan	Estimate	Variance	Planned	Earned	Actual	Cost Variance	Spend Variance	Plan	Estimate	Variance
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Subtotal 26																
27																
28																
Management Reserve						29	30	31						32	33	34
Contingency						35	36	37						38	39	40
41																
Total 42																

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**ATTACHMENT 29
TOTAL PROJECT COST PERFORMANCE REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	Enter project title as listed in official funding documentation. This format can be used to report status of projects, subprojects, or lower level WBS elements within projects as necessary.	11.	Enter earned amount (cumulative for current fiscal year) through reporting period shown in block 2 and consistent with appropriate WBS element. This column is not used when earned progress reporting is not required, or cost management report may be used.
2.	Enter fiscal period consistent with data represented in this report. Report may serve as monthly or quarterly report.	12.	Enter actuals (cumulative for current fiscal year) through reporting period shown in block 2 and consistent with appropriate WBS element.
3.	Enter location of managing site and location of project if different from managing site.	13.	Enter difference between columns 11 and 12.
4.	Enter name of contractor or integrating contractor primarily responsible for data in report.	14.	Enter difference between columns 10 and 12.
5.	Enter date of most recently approved cost plan.	15.	Enter baselined budget amount (consistent with cost plan) that represents entire current fiscal year for appropriate WBS element.
6.	Enter baselined start date of project.	16.	Enter estimated budget requirement needed to perform baselined work for entire current fiscal year for appropriate WBS element.
7.	Enter signature of contractor project manager or integrating contractor primarily responsible for data in report. When this report is submitted as part of a periodic status report or under a letter of transmittal, signature is not necessary.	17.	Enter difference between columns 15 and 16.
8.	Enter project's baselined completion date.	18.	Enter cumulative-to-date, planned budget amount (consistent with cost plan) that represents all reporting periods through period reflected in item 2 for appropriate WBS element.
9.	Enter appropriate reporting level WBS element number and title. Include elements of both capital and operating funded work as appropriate.	19.	Enter cumulative-to-date earned amount that represents all reporting periods through period reflected in item 2 for appropriate WBS element.
10.	Enter planned budget amount (cumulative for current fiscal year) through reporting period shown in block 2 consistent with appropriate WBS element.		

20. Enter cumulative-to-date actuals that represent all reporting periods through period reflected in Item 2 for appropriate WBS element.
21. Enter difference between columns 19 and 20.
22. Enter difference between columns 18 and 20.
23. Enter baseline budget amount (consistent with cost plan) that represents entire project period of performance for appropriate WBS element.
24. Enter estimated budget requirement needed to perform baselined work for entire project period of performance for appropriate WBS element.
25. Enter difference between columns 23 and 24.
26. Enter subtotals for each of columns 10 through 25. Additional subtotals may be added to segregate capital and operating budgets as a data option.
- 27/28. Left intentionally blank. These rows can be used when adding data options to form.
29. Enter amount of management reserve budget for current fiscal year. Capital and operating management reserve may be segregated as a data option.
30. Enter amount of management reserve expected to remain at end of current fiscal year. Entering zero indicates all available management reserve will be used.
31. Enter difference between cells 29 and 30.
32. Enter amount of management reserve budget planned for total project.
33. Enter amount of management reserve budget expected to remain at end of project.
34. Enter difference between cells 32 and 33.
35. Enter amount of contingency for current fiscal year. Capital and operating contingency may be segregated as a data option.
36. Enter amount of contingency expected to remain at end of current fiscal year. Entering zero indicates all available contingency is expected to be used.
37. Subtract amount in cell 36 from amount in cell 35 and Enter difference between cells 35 and 26.
38. Enter amount of contingency planned for total project.
39. Enter amount of contingency expected to remain at end of project.
40. Enter difference between cells 38 and 39.
41. Intentionally left blank. This row can be used when adding data options to form.
42. Enter totals for each of columns 10 through 25. Totals consist of the following: budget subtotals (from item 26), management reserve, and contingency.

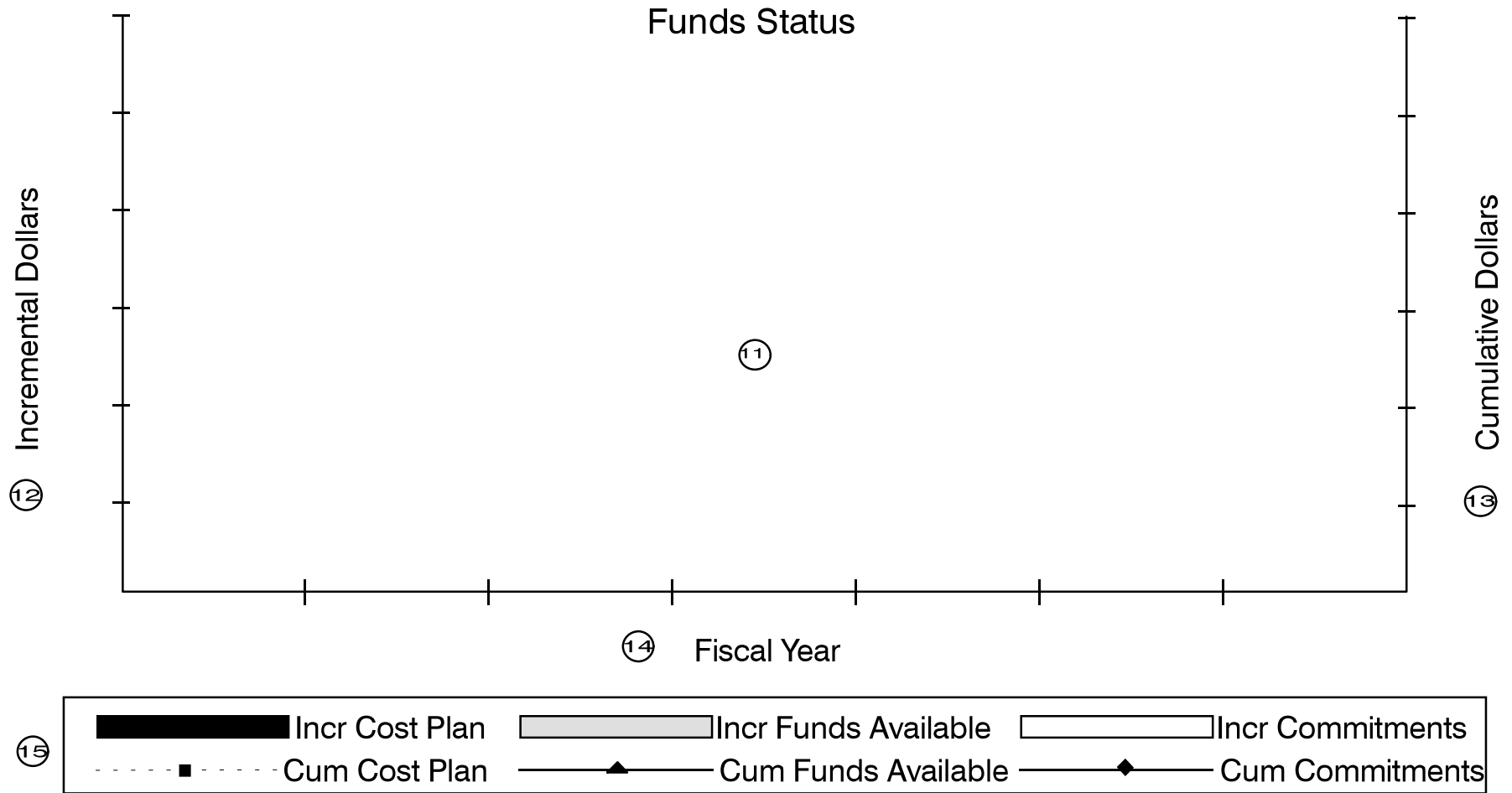
Attachment 30: Sample Total Project Cost Performance Report

Project Title Energistic Pilot Unit						Reporting Period October 1993			Site Mile High Plant							
Reported By Acme Contractors						Cost Plan Date 10-1-92			Start Date 10-1-91							
Signature									Completion Date 6-15-92							
WBS Element	Current Fiscal Year Cumulative-to-Date					At-Completion Year End			Total Project Cumulative-to-Date					At Completion Total Project		
	Planned	Earned	Actual	Cost Variance	Spend Variance	Plan	Estimate	Variance	Planned	Earned	Actual	Cost Variance	Spend Variance	Plan	Estimate	Variance
1.1	473	459	468	-9	5	4168	4158	18	2950	2888	3069	-181	-119	8249	8305	-56
1.2	2	2	2	0	0	83	83	0	14	14	13	1	1	239	239	0
1.3	517	513	524	-11	-7	4407	4359	12	4134	4077	4369	-292	-235	10596	10642	-46
1.4	119	117	122	-5	-3	2613	2605	8	1641	1574	1685	-111	-44	5581	5612	-31
Subtotal	1111	1091	1116	-25	-5	11279	11241	38	8739	8553	9136	-583	-394	24665	24798	-133
Management Reserve						1127	1127	0						1702	1702	0
Contingency						563	563	0						848	848	0
Total	1111	1091	1116	-25	-5	12969	12931	38	8739	8553	9136	-583	-394	27215	27348	-133

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Attachment 31: Funds Status Report

Fiscal Year	Incremental				Carry Over	Cumulative			
	Cost Plan	Funds Authorized	Funds Available	Commits		Cost Plan	Funds Authorized	Funds Available	Commits
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Total									



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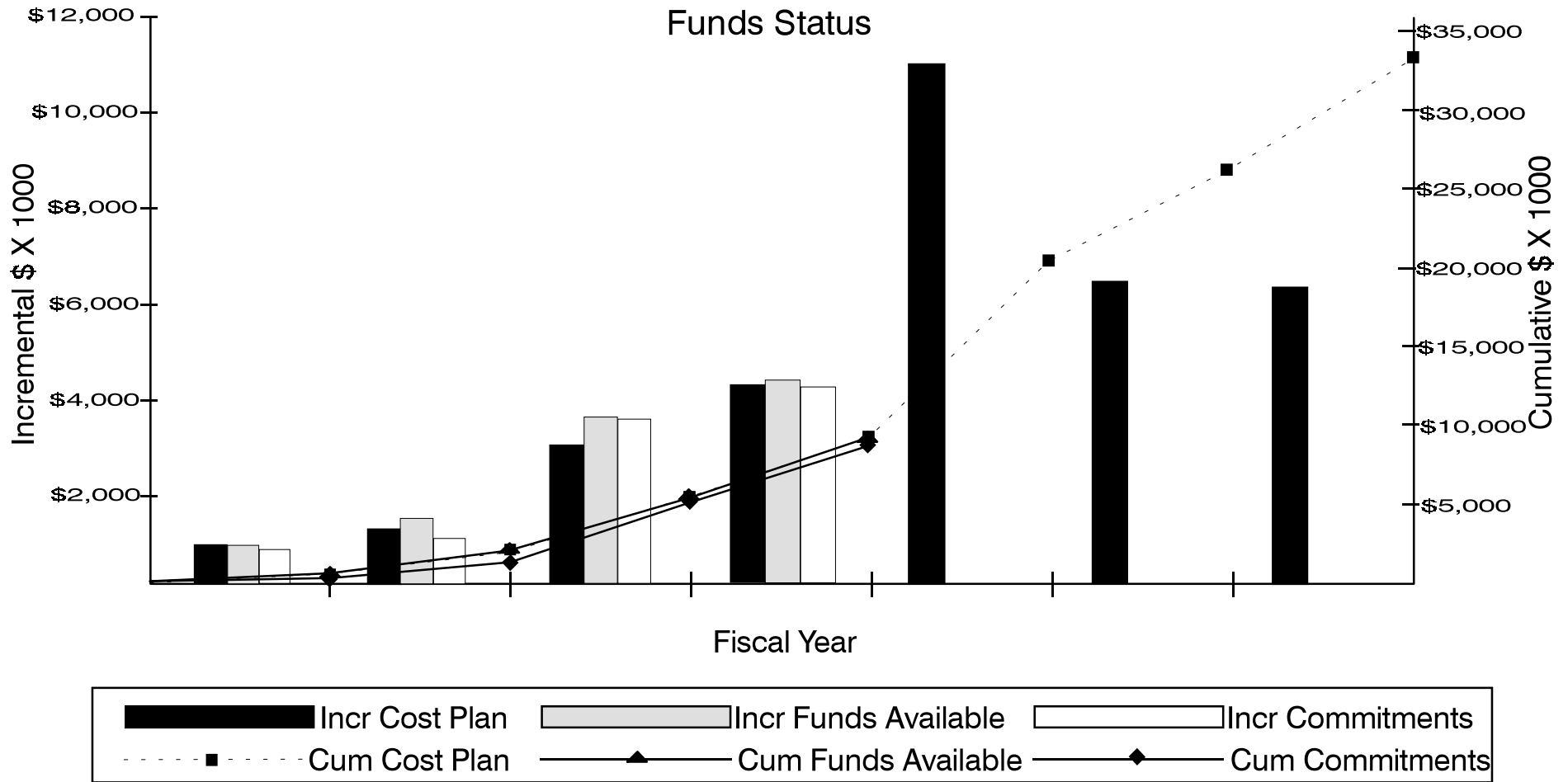
**ATTACHMENT 32
FUNDS STATUS REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
1.	Enter fiscal year for data in the row.	11.	<u>Graphic representation:</u> Plot the following incremental data on a vertical Bar Chart, and the cumulative data on a superimposed line chart (both available on the table described above):
2.	Enter cost baseline value for individual fiscal year only.		<u>Vertical bar chart:</u>
3.	Enter funds authorized for fiscal year.		<ul style="list-style-type: none"> • Incremental Cost Plan • Incremental Funds Available • Incremental Commitments
4.	Enter funds available for fiscal year. This value is the funds authorized for this year plus the carryover from previous year, both data elements in this table.		<u>Line Chart:</u>
5.	Enter the commitments (both open and closed - expenditures are included) for fiscal year.		<ul style="list-style-type: none"> • Cumulative Cost Plan • Cumulative Funds Available • Cumulative Commitments
6.	Enter carryover for fiscal year. This is the difference between commitments and funds available, both data elements in this table.	12.	Label an incremental scale for the vertical bar chart.
7.	Enter cumulative cost baseline value for all project years through subject fiscal year.	13.	Label a cumulative scale for the line chart.
8.	Enter cumulative funds authorized for all project years through subject fiscal year.	14.	Label x axis with each of the fiscal years.
9.	Enter total of funds authorized minus any holdback for each prior year, through subject year.	15.	Show plotting conventions in a legend.
10.	Enter cumulative commitments (open and closed - expenditures are included) for total of all years through subject fiscal year.		Note: Include a title block that includes the following information:
			<ul style="list-style-type: none"> • Project title • Reporting period • Cost Plan date • Complete date • Site • Project participant • Start date • PM Signature

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Attachment 33: Sample Funds Status Report

Fiscal Year	Incremental				Carry Over	Cumulative			
	Cost Plan	Funds Authorized	Funds Available	Commits		Cost Plan	Funds Authorized	Funds Available	Commits
1990	\$660	\$660	\$660	\$498	\$162	\$660	\$660	\$660	\$498
1991	1,380	1,380	1,542	1,013	529	2,040	2,040	2,040	1,511
1992	3,069	3,069	3,598	3,575	23	5,109	5,109	5,109	5,086
1993	4,238	4,238	4,261	4,100	161	9,347	9,347	9,347	9,186
1994	10,914					20,261			
1995	6,436					26,697			
1996	6,302					33,000			
Total	33,000								

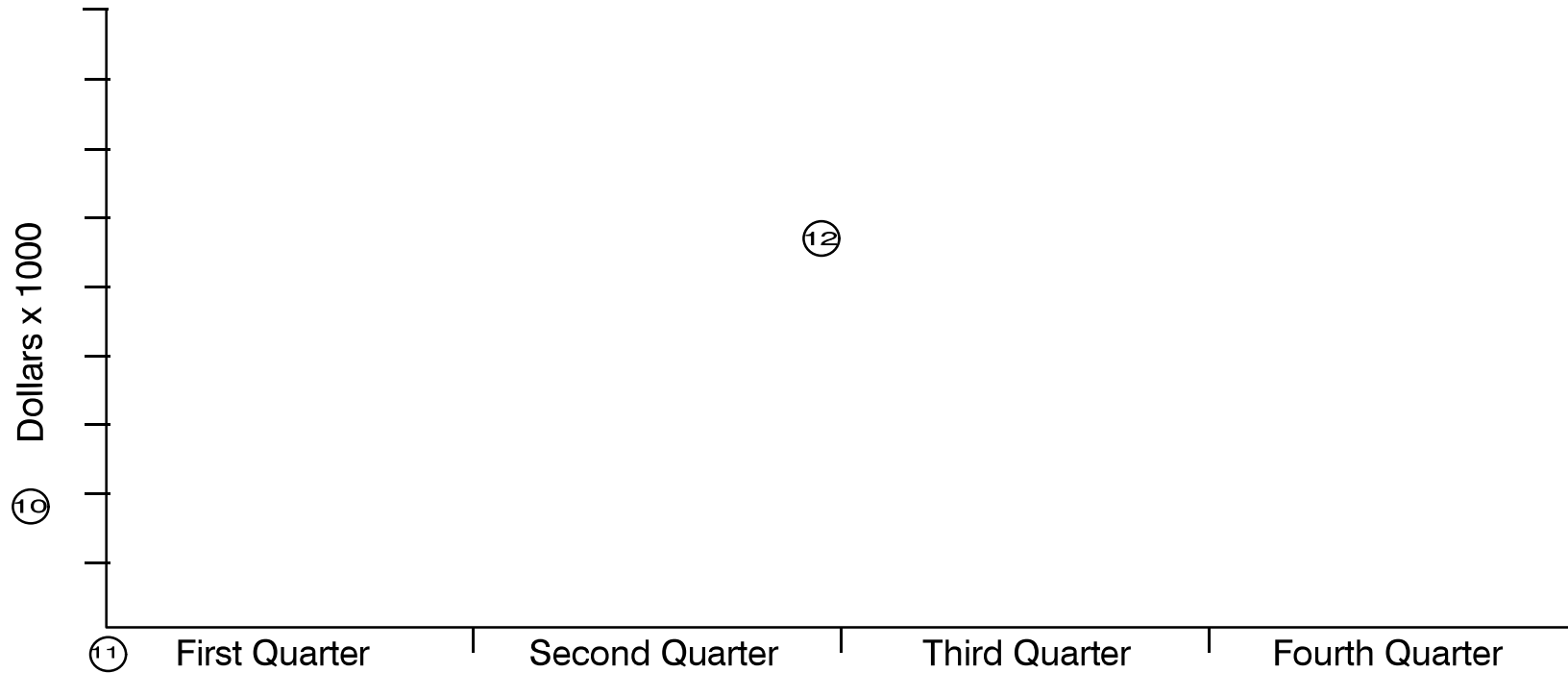


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Attachment 34: Quarterly Funds Management

Report

Funded Item	FY Expenses & Commitments				Balance of FY Available Funds	FY Estimate At Complete	Projected FY Carryover	FY Estimate To Complete
	FY Funds Available	Expenses To Date	Open Commits	Total To Date				
	1	2	3	4=(2+3)				
①	②	③	④	⑤	⑥	⑦	⑧	⑨



⑬ -----Legend-----

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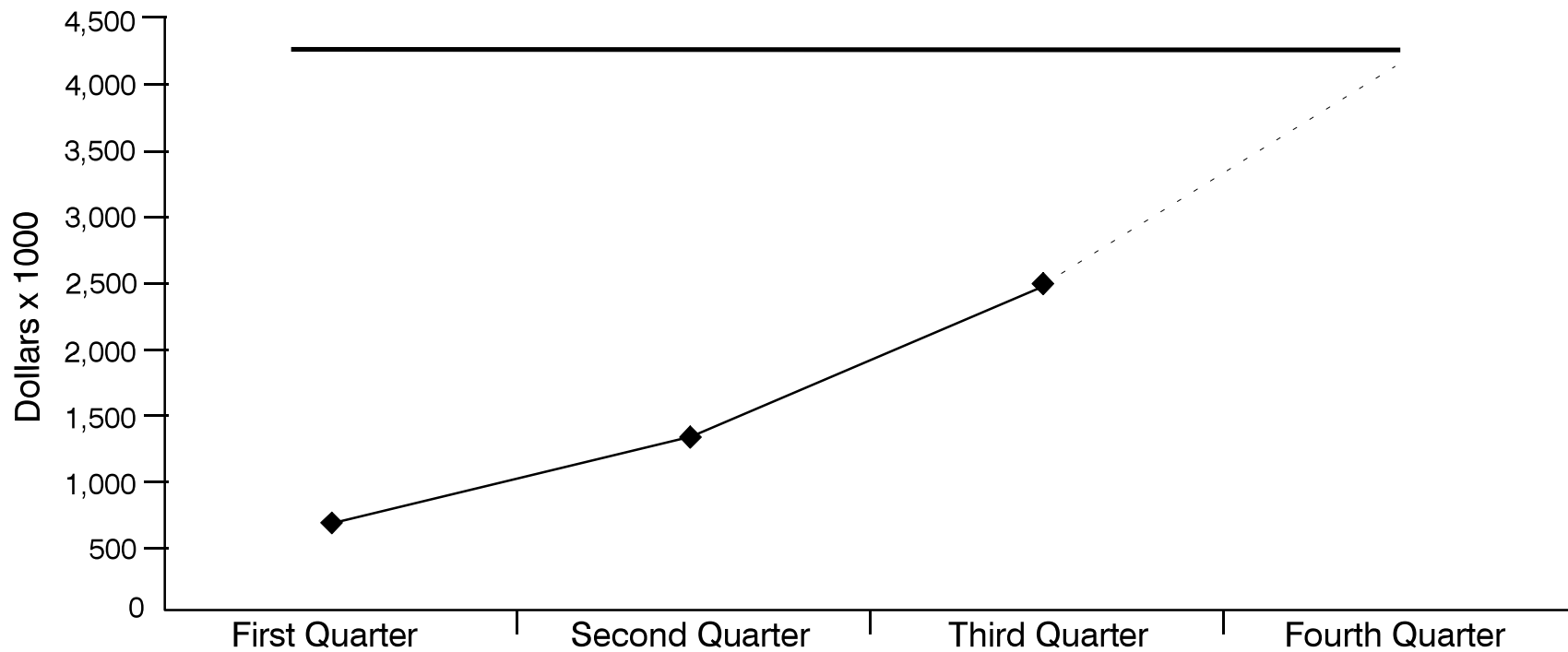
**ATTACHMENT 35
QUARTERLY FUNDS MANAGEMENT REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
1.	Enter funded subject (i.e., project name).		Exclude expenditures against current open commitments.
2.	Enter funds available for current fiscal year.	10.	Label the Y axis with a dollar scale.
3.	Enter current fiscal year expenditures to date.	11.	Label the X axis with time increments appropriate for meaningful monitoring.
4.	Enter current fiscal year commitments to date for which costs have not yet been incurred.	12.	Plot two lines on this chart as described below: <ul style="list-style-type: none"> • Plot cumulative funds available only for current fiscal year - exclude any prior year values. • Plot a single line that represents cumulative commitments (including expenditures) and forecast commitments for current fiscal year; exclude any prior year values. Differentiate between the two data elements.
5.	Enter total commitments (both open and closed - expenditures are included) for fiscal year. This is the sum of columns 2 and 3 (as labeled).	13.	Show plotting conventions in a legend.
6.	Enter unobligated funds for current year. This is obtained by subtracting column 4 from column 1 (as labeled).		Note: Include a title block that includes the following information: <ul style="list-style-type: none"> • Project title • Reporting period • Cost Plan date • Complete date • Site • Project participant • Start date • PM Signature
7.	Enter total amount of expenditures plus open commitments expected for current year.		
8.	Enter amount of available funding that will not be committed during this fiscal year. This is the difference between columns 1 and 6 (as labeled).		
9.	Enter estimated value of future current fiscal year commitments (expenditures against those commitments are included).		

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Attachment 36: Sample Quarterly Funds Management Report

Funded Item	FY93 Funds Available	FY93 Expenses & Commitments			Balance of FY93 Available Funds	FY93 Estimate At Complete	Projected FY93 Carryover	FY93 Estimate To Complete
		Expenses To Date	Open Commits	Total To Date				
	1	2	3	4=(2+3)	5=(1-4)	6	7=(1-6)	8=(6-4)
Plating Shop	\$4,261	\$3,758	\$342	\$4,100	\$161	\$4,100	\$161	0



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Attachment 37: Total Project Resource Plan

Project Title ①					Current Fiscal Year ②					Site ③											
Reported By					Cost Plan Date ⑤					Start Date ⑥											
										Completion Date ⑦											
WBS Element/Resource	Plan Prior Fiscal Years	Current Fiscal Year												5 Year Plan				Plan Remain Fiscal Years	Total		
		O	N	D	J	F	M	A	M	J	J	A	S	Total	⑫						
⑧	⑨	⑩												⑪	⑬					⑭	⑮
Total ⑯																					
Units Expres ⑰ In:		Approved: Participant Project Manager Signature and Date ⑱																			

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**ATTACHMENT 38
TOTAL PROJECT RESOURCE PLAN
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	Enter project title as listed in official funding documentation. This format can be used as a resource plan for any project or subproject as appropriate, and at multiple levels within a project or subproject.	10.	Spread resource amount for current fiscal year over a 12-month period, consistent with the way work will be performed, for each WBS element or resource in item 8. Quarterly periods may also be used depending upon project planning and reporting requirements. Enter each month or quarter resource plan amount in appropriate column.
2.	Enter fiscal year corresponding to periodic resource data that begins in item 10.	11.	Enter total 12-month resource plan amount.
3.	Enter location of managing site and location of project if different from managing site.	12.	Enter next 5 fiscal years subsequent to the current fiscal year shown in item 2.
4.	Enter name of contractor or integrating contractor primarily responsible for data in plan.	13.	Enter planned resource amount for each fiscal year in 5 Year Plan by WBS element or resource.
5.	Enter date of most recently approved cost plan.	14.	Enter planned resource amount for any project years remaining beyond 5 Year Plan.
6.	Enter baseline start date of project.	15.	Enter total of items 9, 11, 13 (all 5 years), and 14 for each WBS element or resource.
7.	Enter baseline completion date of project.	16.	Enter totals of each column.
8.	Enter appropriate WBS element number and title or resource title as appropriate. This column can also be used to enter subtotals as necessary.	17.	Enter unit of measure for resource amounts shown on this form (job hours, each, tons, feet, etc.).
9.	Enter cumulative planned amount for fiscal year(s) prior to current fiscal year for each WBS element in item 8.	18.	Signature of contractor project manager and date signed, verifying validity of data furnished.

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Attachment 39: Sample Total Project Resource Plan

Project Title		Energistic Pilot Unit													Current Fiscal Year		1993					Site		Mile High Plant				
Reported By		Acme Contractors One Construction Place Anyplace, USA 12345													Cost Plan Date		10-1-92					Start Date		10-1-91				
															Completion Date		6-15-95											
WBS Element/Resource	Plan Prior Fiscal Years	Current Fiscal Year													5 Year Plan					Plan Remain Fiscal Years	Total							
		O	N	D	J	F	M	A	M	J	J	A	S	Total	94	95												
1.1	957	269	269	269	269	269	269	148	148	148	148	148	148	148	2502	809	58						4326					
1.2	4	1	2	2	2	2	3	5	9	9	10	14	13	72	56	3							135					
1.3	1358	263	270	283	308	308	308	156	156	156	149	149	149	2655	1161	64							5238					
1.4	769	77	83	83	83	81	81	100	100	100	100	100	100	1088	738	143							2738					
Total	3088	610	624	637	662	660	661	409	413	413	407	411	410	6317	2764	268							12437					
Units Expressed In: Hours/Thousands		Approved: Participant Project Manager Signature and Date																										

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**ATTACHMENT 41
TOTAL PROJECT RESOURCE MANAGEMENT REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	Enter project title as listed in official funding documentation. This format can be used as a resource management report for any project or subproject, and at multiple levels within a project or subproject.		in block 2 consistent with appropriate WBS element or resource.
2.	Enter fiscal period(s) consistent with data represented in this report. This report may serve as a monthly or quarterly report.	12.	Enter difference between columns 11 and 12.
3.	Enter location of managing site and location of project if different from managing site.	13.	Enter plan amount that represents entire current fiscal year for appropriate WBS element or resource.
4.	Enter name of contractor or integrating contractor primarily responsible for data in plan.	14.	Enter estimated resource amount for entire current fiscal year that includes resources expended plus amount needed to complete all remaining work.
5.	Enter date of most recently approved resource plan. Resource plan date is the date of approval by the project manager.	15.	Enter difference between columns 13 and 14.
6.	Enter baseline start date of project.	16.	Enter cumulative-to-date (all prior periods inclusive of current period) plan amount for appropriate WBS element or resource.
7.	Signature of contractor project manager indicates agreement with accuracy of data presented in this report.	17.	Enter cumulative-to-date (all prior periods inclusive of current period) expenditures consistent with appropriate WBS element or resource.
8.	Enter baseline completion date of project.	18.	Enter difference between columns 16 and 17.
9.	Enter WBS element number and title or resource title as appropriate. Titles in this column should be consistent with titles in Resource Plan. This column can also be used to enter subtotals as necessary.	19.	Enter resource plan amount cumulative for entire project period of performance.
10.	Enter resource plan amount (cumulative for current fiscal year) through reporting period shown in block 2 consistent with appropriate WBS element or resource. Use same unit of measure used in Resource Plan.	20.	Enter estimated resource amount for entire project period of performance that includes resources expended plus amount needed to complete all remaining work.
11.	Enter expenditures (cumulative for current fiscal year) through reporting period shown	21.	Enter difference between columns 19 and 20.
		22.	Total individual columns, 10 through 21 and enter in cells provided.

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Attachment 42: Sample Total Project Resource Management Report

Project Title Energistic Pilot Unit				Reporting Period October 1993				Site Mile High Plant				
Reported By Acme Contractors				Resource Plan Date FY 1993 Plan				Start Date 10-1-91				
Signature								Completion Date 6-15-95				
WBS Element/Resource	Current Fiscal Year Cumulative-To-Date			At-Completion Year End			Total Project Cumulative-To-Date			At-Completion Total Project		
	Plan	Actual	Variance	Plan	Estimate	Variance	Plan	Actual	Variance	Plan	Estimate	Variance
1.1	269	265	4	2502	2502	0	1226	1241	-15	4326	4341	-15
1.2	1	1	0	72	72	0	5	5	0	135	135	0
1.3	263	267	-4	2655	2655	0	1621	1727	-106	5238	5344	106
1.4	77	77	0	1088	1088	0	846	870	-24	2738	2762	-24
Total	610	610	0	6317	6317	0	3698	3843	-145	12437	12582	-145

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Attachment 43: Funding And Budget Impact Charts

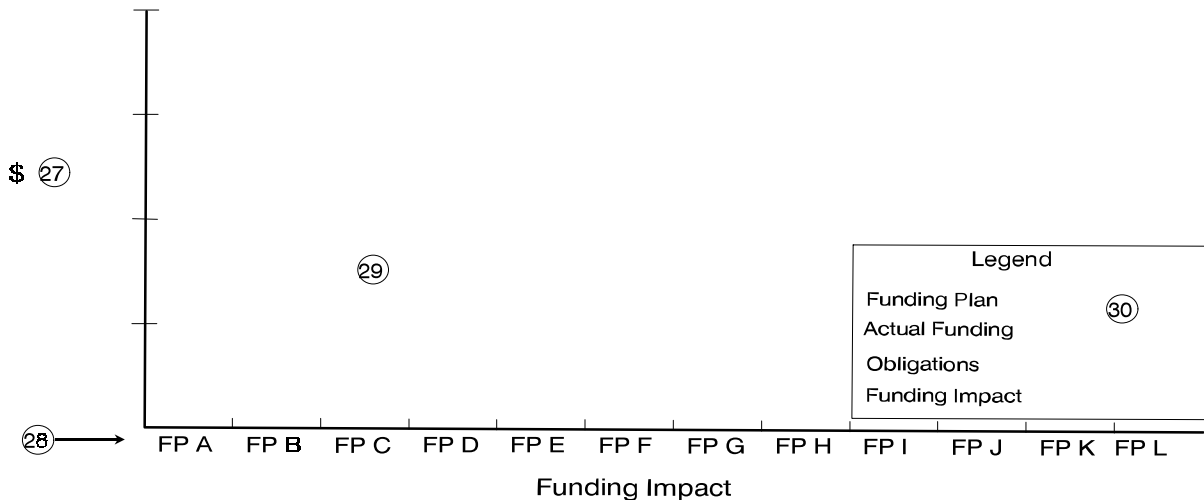
Project Title (1)		Project Area (2)			Site (3)		
Report Pd (4)	Participant (5)	Baseline Date (6)	Start Date (7)	Complete Date (8)	Signature (9)		

COST/ SCHEDULE BASELINE IMPACT

Data Date: (10)

ELEMENT (11)	(12)											
(13) MILESTONES LEGEND PLANNED FORECAST ACTUAL												
(14) →	FYA	FYB	FYC	FYD	FYE	FYF	FYG	FYH	FYI	FYJ	FYK	FYL
BUDGET PLAN	(15)											
ACTUAL COST	(16)											
VARIANCE	(17)											
ETC	(18)											
TOTAL FLOAT	(19)											
EAC												(20)

(21) →	FYA	FYB	FYC	FYD	FYE	FYF	FYG	FYH	FYI	FYJ	FYK	FYL
Funding Plan	(22)											
Actual Funding	(23)											
Variance	(24)											
Obligations	(25)											
Funding Impact	(26)											



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**ATTACHMENT 44
FUNDING AND BUDGET IMPACT CHARTS
FORM INSTRUCTIONS**

Item Instructions

1. Enter project title as listed in official funding documentation.
2. Enter specific project area, system, or other package component about which this report is oriented.
3. Enter location of managing site and location of project if different from managing site.
4. Enter period(s) represented by this report.
5. Enter name of contractor or integrating contractor primarily responsible for report information and integrity.
6. Enter official date of most recently approved baseline.
7. Enter baseline start date of project.
8. Enter baseline completion date of project.
9. Enter signature of project manager for contractor or integrating contractor primarily responsible for report information and integrity.

Cost/Schedule Baseline impact Chart

10. Enter date for which report information is accurate.
11. Describe each set of comprehensive project elements that will be represented on bar chart that will be displayed as discussed in item 12. Total project budget, total float, and funding information represented below applies to the collection of these elements.

Item Instructions

12. Apply graphic bar chart conventions that clearly display the following:
 - 12A. For each element listed in item 11 above, application time spans including:
 - Baseline, actual, and current forecast start and completion points in time.
 - Subordinate major milestones and associated baseline, actual, and current forecast start and completion points in time.
 - 12B. Status date point in time.
13. Concisely define milestones, and clearly display planned, forecast, and actual conventions for both elements (activities) and milestones.
14. Apply a date ribbon identifying each Fiscal Period (FP) (e.g., FY95) that applies to this project.
15. Enter cumulative baseline project budget (BCWP) for each fiscal period.
16. Enter cumulative project actual cost (ACWP) for each fiscal period.
17. Enter cumulative project spend variance (BCWP-ACWP) for each fiscal period.
18. Enter current forecast cost for each future fiscal period to complete project.
19. Enter Most Critical Total Float (MCTF) on project schedule for this fiscal period, and at end of each prior fiscal period.

Cost/Schedule Baseline impact Chart

20. Enter current Estimate At Complete (EAC) in cell that represents final fiscal

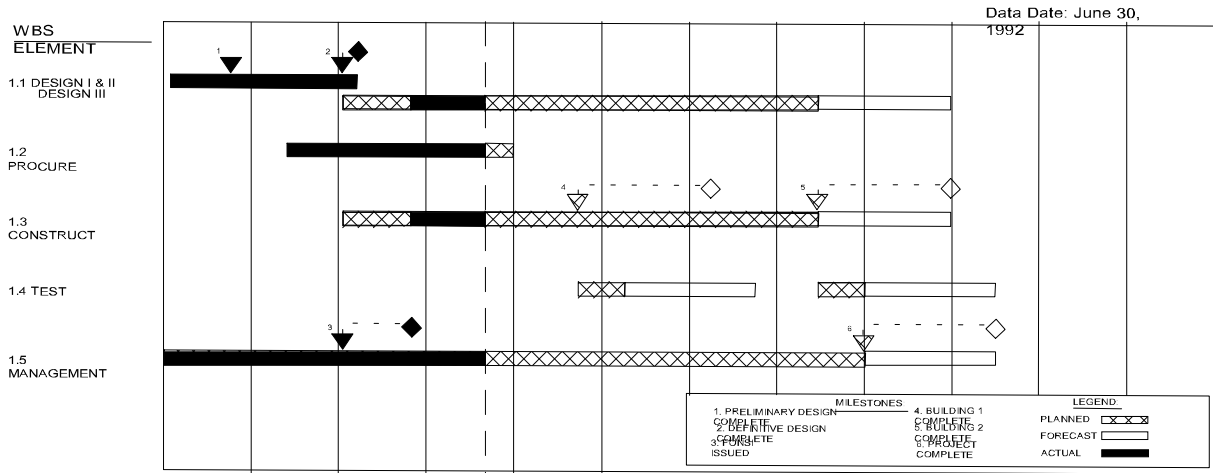
**ATTACHMENT 44
FUNDING AND BUDGET IMPACT CHARTS
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instructions</u>	<u>Item</u>	<u>Instructions</u>
	period according to the current forecast schedule.	25.	Enter incurred cumulative project obligations for current and each prior fiscal period.
21.	As in item 14, apply a date ribbon that identifies each Fiscal Period (FP) (IE. FY95) that applies to this project.	26.	Enter cumulative funding required to support EAC (item 20) for each future fiscal period including remainder of current fiscal period if additional current period funding is necessary.
22.	Enter project baseline funding plan (that which correlates with budget baseline) cumulative dollar value for each fiscal period.	27.	Apply a relevant dollar value scale.
23.	Enter actual cumulative dollar amount of project funding for current and each prior fiscal period.	28.	Apply same relevant date ribbon as in items 14 and 21 above.
24.	Enter cumulative funding variance (planned cumulative funding - actual cumulative funding) for current and each prior fiscal period.	29.	Clearly plot and differentiate data in items 22 (Funding Plan), 23 (Actual Funding), 25 (Obligations), and 26 (Funding Impact) above.
		30.	Clearly display plotting conventions used in item 29 above.

Attachment 45: Sample Funding And Budget Impact Charts

Project Title		Project Area			Site		
Report Pd	Participant	Baseline Date	Start Date	Complete Date	Signature		

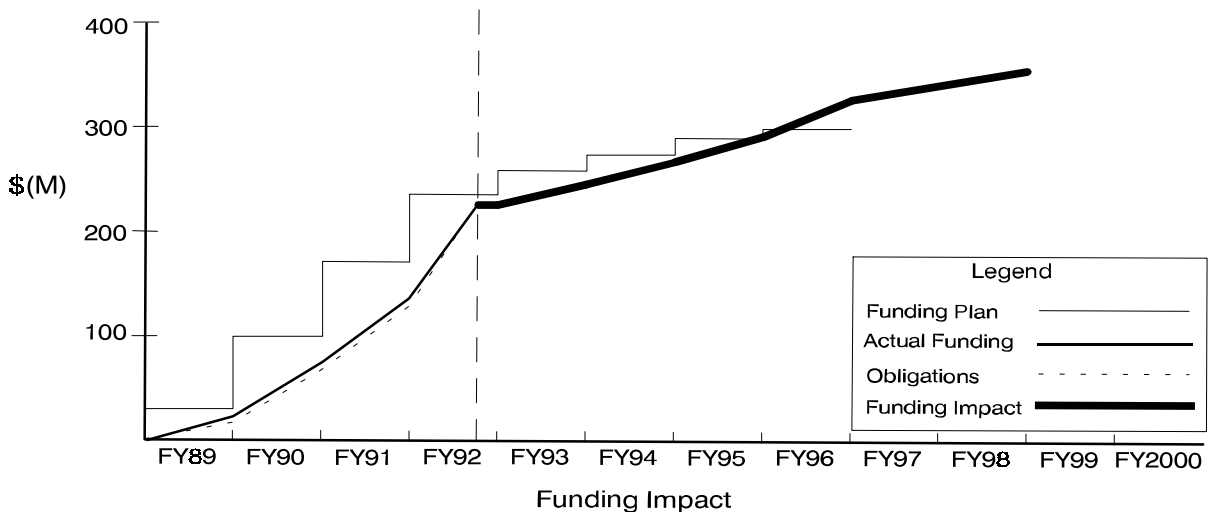
COST/ SCHEDULE BASELINE IMPACT



	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY2000
BUDGET PLAN	23	73.8	132	190.2	228.9	257.6	280.8	300				
BUDGET ACTUAL	20	72	128	191								
COST VARIANC	3	1.8	4	-8								
E ETC				7.2	45.7	34.7	28.2	23.2	17.5	8.5		
TOTAL FLOAT	-30	-90	-270	-525								
EAC										356		

(DOLLARS IN MILLIONS)

	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY2000
Funding Plan	30	100	171	237	260	275	291	300				
Actual Funding	22	77	136	228								
Variance	8	23	35	9								
Obligations	19.3	75.8	135	222.7								
Funding Impact					248	269	291	319	341	356		



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Attachment 46: Total Project Status Report

Program Secretarial Office: (1)		Operations/Field Office: (2)		Project Title/Number: (3)			Report Period: (4)		Project Location: (5)														
DOE Project Manager Name/Signature: (6)				Telephone: (7)		Cost Plan Date: (8)		Project Start: (9)		Project Completion: (10)													
Funds				Cumulative Costs				Cost-At-Completion															
Fiscal Year		Total Project		Fiscal Year		Total Project		Fiscal Year		Total Project													
Obligational Authority (11)		Obligational Authority (13)		Planned (15)		Planned (17)		Plan (19)		Plan (21)													
Obligated (12)		Obligated (14)		Actual (16)		Actual (18)		Estimate (20)		Estimate (22)													
Program Level Milestone Description							Funds Management Graph																
Description				Planned		Forecast/Actual (A)		(23)															
1 (24)				(25)		(26)																	
2																							
3																							
4																							
5																							
6																							
<table border="1" style="width: 100%; border-collapse: collapse; margin: 0 auto;"> <tr> <td style="width: 10%;">Oct</td> <td style="width: 10%;">Nov</td> <td style="width: 10%;">Dec</td> <td style="width: 10%;">Jan</td> <td style="width: 10%;">Feb</td> <td style="width: 10%;">Mar</td> <td style="width: 10%;">Apr</td> <td style="width: 10%;">May</td> <td style="width: 10%;">Jun</td> <td style="width: 10%;">Jul</td> <td style="width: 10%;">Aug</td> <td style="width: 10%;">Sep</td> </tr> </table>												Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep												
Project Level Accomplishments:																							
(27)																							
Problems/Issues Requiring HQ Assistance:																							
(28)																							

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ATTACHMENT 47
TOTAL PROJECT STATUS REPORT
FORM INSTRUCTIONS

Item Instructions

1. Enter name of applicable PSO.
2. Enter name of managing field or operations office as appropriate.
3. Enter title and number of project as it appears on official funding documentation.
4. Enter period representing data contained in report.
5. Enter physical location of project. If project includes multiple sites, enter location of primary site.
6. Enter name of DOE project manager. Signature of DOE project manager indicates agreement with data presented in report.
7. Enter work telephone number of DOE project manager whose name appears in block 6.
8. Enter date of most recently approved cost plan.
9. Enter baseline start date of project.
10. Enter baseline completion date of project.
11. Enter dollar amount of obligational authority, including carryover and new budget authority, for current fiscal year. Adjust this amount when new BA is received.
12. Enter cumulative-to-date dollar amount of obligations for current fiscal year.

Item Instructions

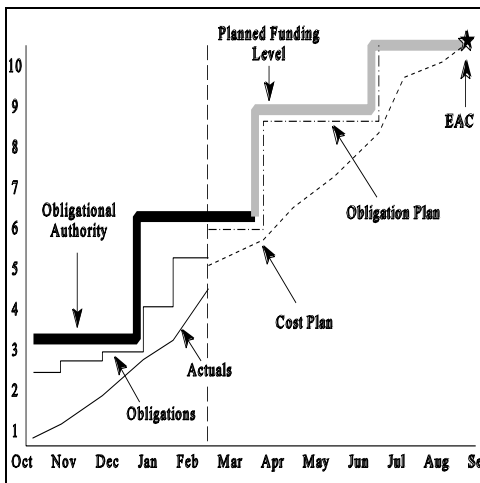
13. Enter cumulative-to-date dollar amount of obligational authority for total project period of performance. This amount includes prior fiscal years and should be adjusted as new budget authority is received.
14. Enter cumulative-to-date dollar amount of obligations for total project period of performance.
15. Enter planned budget amount (cumulative for current fiscal year) through reporting period shown in item 4. This amount is oriented to the performance measurement baseline and excludes management reserve and contingency.
16. Enter actuals (cumulative for current fiscal year) through the reporting period shown in Item 4.
17. Enter cumulative-to-date, planned budget amount (consistent with cost plan) that represents all reporting periods through period reflected in Item 4. This amount is oriented to performance measurement baseline and excludes management reserve and contingency.
18. Enter cumulative-to-date actuals that represent all reporting periods through period reflected in item 4.
19. Enter baseline budget amount (consistent with cost plan), including management reserve and contingency, for current fiscal year.
20. Enter estimated budget requirement needed to perform baselined work,

**ATTACHMENT 47
TOTAL PROJECT STATUS REPORT
FORM INSTRUCTIONS**

Item Instructions

including management reserve and contingency, for current fiscal year.

- 21. Enter baseline budget amount (consistent with cost plan) that represents entire project period of performance, including management reserve and contingency.
- 22. Enter estimated budget requirement needed to perform baselined work for entire project period of performance, including management reserve and contingency.
- 23. Graphs of current fiscal year funding and cost information can be entered in this block. One conceptual example is shown below:



- 24. Enter name of milestone being tracked in this report at Headquarters level. Critical and other program level milestones are appropriate for this section. A continuation sheet containing additional milestones may be attached to this report if necessary; however, the

Item Instructions

intent of this report is track a few important, high level milestones.

- 25. Enter baseline, planned completion date of milestone.
- 26. Enter as appropriate the forecast completion date of milestone or milestone's actual completion date. Actual completion dates are designated as such by the letter A printed next to the date.
- 27. Enter narrative necessary to describe only significant project accomplishments of interest to Headquarters level. A continuation sheet may be attached if necessary; however, the intent is to report only a few, important accomplishments.
- 28. Enter, in bulletized format, a succinct description of problems that require Headquarters assistance to resolve. Also, describe problems expected to cause significant, unrecoverable cost or schedule impacts. A continuation sheet may be attached if necessary; however, the intent of this report is track the most significant problems/issues.

Attachment 48: Sample Total Project Status Report

Program Secretarial Office: Energy Research		Operations/Field Office: Table Mesa Office		Project Title/Number: Energistic Pilot Unit		Report Period: October 1993		Project Location: Mile High Plant			
DOE Project Manager Name/Signature:				Telephone: 303-555-1212		Cost Plan Date: 10-1-92		Project Start: 10-1-91		Project Completion: 6-15-95	
Funds				Cumulative Costs				Cost-At-Completion			
Fiscal Year		Total Project		Fiscal Year		Total Project		Fiscal Year		Total Project	
Obligational Authority 6000		Obligational Authority 15136		Planned 1111		Planned 8739		Plan 12969		Plan 27215	
Obligated 5486		Obligated 14622		Actual 1116		Actual 9136		Estimate 12931		Estimate 27348	
Program Level Milestone Description						Funds Management Graph					
Description				Planned		Forecast/Actual (A)					
1 Land Improvements Complete				6-15-92		9-29-92 (A)					
2 Foundation/Substructures Complete				3-1-93		5-18-93 (A)					
3 Superstructures Complete				5-20-93		7-11-93 (A)					
4 Finishing Complete				5-15-94		5-15-94					
5 Utilities Complete				6-1-95		6-1-95					
6 Instrumentation/Controls Complete				6-1-95		6-1-95					
<div style="display: flex; justify-content: space-between; font-size: small;"> OctNovDecJanFebMarAprMayJunJulAugSep </div>											
<p>Project Level Accomplishments:</p> <p style="padding-left: 40px;">Exterior finishing has been completed, and electrical installation will complete on schedule. Installation of instrumentation and controls has started on on schedule.</p>											
<p>Problems/Issues Requiring HQ Assistance:</p> <p style="padding-left: 40px;">Budget authority is not sufficient to complete the amount of work scheduled for this fiscal year. New BA must be received in sufficient time to obligate subcontracted efforts. Work deferrals will be required without additional funds</p>											

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Attachment 49: Funds and Schedule Status Report

Program Secretarial Office ①					Operations/Field Office ②												
Project Title/Number ③				Report Period ④				Cost Plan Date ⑤									
Item	Prior Years	Current Fiscal Year				CY + 1	CY + 2	CY + 3	CY + 4	CY + 5	Remain Years	Total					
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr												
Funds (\$ Millions)																	
Planned (DOE)	⑥	⑦				⑧					⑨	⑩					
Planned (Other Sources)																	
Obligational Authority (DOE)	⑪	⑫										⑬					
Obligational Authority (Other Sources)																	
Obligated	⑭	⑮										⑯					
Percent Complete																	
Planned	⑰	⑱				⑲					⑳	㉑					
Actual	㉒	㉓										㉔					
Milestone Description	Dates		⑳	㉕	㉖	㉗	㉘	㉙	㉚	㉛	㉜	㉝					
	Planned	F/A															
<u>Integration</u>																	
⑳	㉑	㉒	㉓														
<u>Project</u>																	
㉑	㉒	㉓															
⑳			㉑			㉒			㉓			㉔					
DOE Project Manager Name			Telephone Number			Signature/Date			DOE Program Manager Name			Telephone Number			Signature/Date		
Clarifying Narrative Attached? Yes [] No []																	
㉕																	

Figure 3.6-7

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**ATTACHMENT 50
FUNDS AND SCHEDULE STATUS REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	Enter name of appropriate PSO.	11.	Enter cumulative, net amount of obligational authority for project prior to current fiscal year. Segregate DOE obligational authority from other sources, and enter amount in appropriate block.
2.	Enter location of managing site and location of project if different from managing site.	12.	Enter amount of funding received during current fiscal year by quarter. Enter zero if funding was not received during a particular quarter. Maintain segregation of obligational authority.
3.	Enter project title/number as it appears on official funding documentation.	13.	Enter total of columns 11 and 12 (all quarters). This amount should reflect all funding received, regardless of source. Maintain segregation of obligational authority.
4.	Enter reporting period consistent with data represented in this report.	14.	Enter cumulative amount of funds obligated prior to current fiscal year. This amount is inclusive of all funding sources.
5.	Enter date of most recently approved cost plan.	15.	Enter cumulative amount of funds obligated for current fiscal year on a quarterly basis. This amount is inclusive of all funding sources.
6.	Enter cumulative amount of funds planned for project prior to current fiscal year. Segregate DOE funds from other funding sources and enter amount in appropriate block.	16.	Enter total of columns 14 and 15 (all quarters). This amount should reflect all project obligations.
7.	Enter amount of funding planned for current fiscal year. If all funding is to be received in first quarter, enter that amount under "1st Qtr". If planned funding is incremental, enter amounts under appropriate quarter. Maintain segregation of funding sources.	17.	Enter cumulative, planned percent complete of work accomplishment prior to current fiscal year.
8.	Enter amount of funding planned for each of 5 fiscal years beyond current fiscal year. Maintain segregation of funding sources.	18.	Enter planned percent complete of work accomplishment for each quarter in current fiscal year.
9.	Enter remaining amount of planned funding through project completion. Maintain segregation of funding sources.	19.	Enter planned percent complete of work accomplishment for each year in 5-year forecast.
10.	Enter total of blocks 6, 7 (current fiscal year total), 8 (inclusive of 5 planned years), and 9. This total should equal total funding requirement planned for project. Maintain segregation of funding sources.		

**ATTACHMENT 50
FUNDS AND SCHEDULE STATUS REPORT
FORM INSTRUCTIONS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
20.	Enter planned percent complete of work accomplishment for remainder of project.	30.	Enter baseline completion date of each project milestone.
21.	Enter total of blocks 17, 18 (all quarters), 19 (inclusive of 5 five planned years), and 20. Total should equal 100 percent.	31.	Enter as appropriate the forecast completion date of milestone or milestone's actual completion date. Actual completion dates are designated as such by the letter A printed next to date.
22.	Enter cumulative, actual percent complete of work accomplished prior to current fiscal year.	32.	Enter name of DOE project manager.
23.	Enter actual percent complete of work accomplished during each quarter of current fiscal year.	33.	Enter work telephone number of DOE project manager.
24.	Enter total of blocks 22 and 23 (all quarters). Total should equal cumulative percent complete of project work accomplished to date.	34.	Signature and date of DOE project manager indicates agreement with data presented in this report.
25.	Enter name of each program level milestone having a constraining effect on project milestones.	35.	Enter name of DOE program manager.
26.	Enter baseline completion date of each integration milestone.	36.	Enter work telephone number of DOE program manager.
27.	Enter as appropriate forecast completion date of milestone or milestone's actual completion date. Actual completion dates are designated as such by the letter A printed next to the date.	37.	Signature and date of DOE program manager indicates agreement with data presented in this report.
28.	Enter in the columns beneath the date ribbon, a milestone schedule with logic as appropriate for both integration and project milestones. Milestone schedule should portray baselined and forecast dates.	38.	Enter a check in <i>yes</i> or <i>no</i> brackets as appropriate to indicate continuation sheets attached to this report.
29.	Enter name of project level milestone being constrained by integration milestones. Enter baseline date of each project milestone.		

Attachment 51: Sample Funds and Schedule Status Report

Program Secretarial Office						Operations/Field Office											
Energy Research						Mile High Plant											
Project Title/Number						Report Period					Cost Plan Date						
Energistic Pilot Unit						Jul - Sep 1993					10-1-91						
Item	Prior Years	Current Fiscal Year				CY + 1	CY + 2	CY + 3	CY + 4	CY + 5	Remain Years	Total					
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr												
Funds (\$ Millions)																	
Planned (DOE)	3500	2305		2305		13645	5395	1541				28691					
Planned (Other Sources)	0	0	0	0	0	0	0	0				0					
Obligational Authority (DOE)	3500	2305		2305							8110						
Obligational Authority (Other Sources)	0	0	0	0	0						0						
Obligated	3500	1869	409	2000	305						8110						
Percent Complete																	
Planned	14.1	4.6	4.6	4.6	4.6	45.5	17.0	5.0				100					
Actual	13.0	4.3	4.3	4.3	4.3						30.2						
Milestone Description	Dates																
	Planned	F/A															
Integration																	
HQ-1	2-15-93	4-15-93 A															
Project																	
MS-1	6-15-92	9-29-92 A															
MS-2	3-1-93	5-18-93 A															
MS-3	5-20-93	7-11-93 A															
MS-4	5-15-94	5-15-94															
MS-5	6-1-95	6-1-95															
MS-6	6-1-95	6-1-95															
DOE Project Manager Name			Telephone Number			Signature/Date			DOE Program Manager Name			Telephone Number			Signature/Date		
Clarifying Narrative Attached? Yes [] No []																	

Figure 3.6-9

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ATTACHMENT 52

PROJECT SUMMARY FOR MONTH ENDING _____

Title:
 DOE Directive Number:
 B&R Number:
 Funding Source:
 Des. Team Ldr., Org.:
 End User Pt. of Cont., Org.:

Original Funding Year:
 Modification No.:
 Proj. Mgr., Org., Phone:
 Const. Mgmt. Engr., Org.:
 Tech Area:
 Building(s):

	<i>CAPITAL BUDGET K \$</i>						<i>EXPENSE BUDGET K \$</i>				
	Prior	FY95	FY96	Outyrs	Total		Prior	FY95	FY96	Outyrs	Total
ED&I	_____	_____	_____	_____	_____	Dev	_____	_____	_____	_____	_____
Const	_____	_____	_____	_____	_____	ED&I	_____	_____	_____	_____	_____
Equip	_____	_____	_____	_____	_____	Const/Ins	_____	_____	_____	_____	_____
Mgmt	_____	_____	_____	_____	_____	Equip	_____	_____	_____	_____	_____
Cont	_____	_____	_____	_____	_____	E'S&H	_____	_____	_____	_____	_____
<i>TEC</i>	_____	_____	_____	_____	_____	Asbest	_____	_____	_____	_____	_____
						Mgmt	_____	_____	_____	_____	_____
						Cont	_____	_____	_____	_____	_____
						<i>Total</i>	_____	_____	_____	_____	_____

(Management includes project management and construction management)

Description: _____

Justification: _____

How does this project affect other specific projects? How is this project affected by other specific projects? _____

Major Milestones (add or modify significant milestones as appropriate):

	<i>CURRENT BASELINE</i>		<i>ACTUAL/ANTICIPATED</i>		<i>VARIANCE</i>
	<u>Start</u>	<u>Complete</u>	<u>Start</u>	<u>Complete</u>	<u>(Weeks)</u>
Conceptual Design:					
Design:					
Procurement:					
Construction:					
Occupancy Design:					
Occupancy Procurement:					
Occupancy Construction:					

Project Manager Recommendation: _____

Date: _____

Program Manager Approval: _____

Date: _____

Title: _____ Month: _____

	Yes	No	
			If the answer is no, explain why not or when expected. If the answer is yes, state when approved and by whom
Is the Project Authorized?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Has a Project Management Plan Been Approved?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Has NEPA Documentation Been Approved?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Has Safety Documentation Been Approved?	<input type="checkbox"/>	<input type="checkbox"/>	_____
Has a Construction Contract(s) Been Awarded?	<input type="checkbox"/>	<input type="checkbox"/>	Award Date(s): _____ Contract No(s): _____

Capital Costs/Forecast (K\$)

Total Cost

	LTD Com- mitments	LTD Costs	FY95 Planned	YTD Actual	Latest FY95 Forecast	FY95 % Costed*	FY96 Forecast	Outyears Forecast	Forecast (All Yrs)
ED&I	_____	_____	_____	_____	_____	_____	_____	_____	_____
Construction	_____	_____	_____	_____	_____	_____	_____	_____	_____
Equipment	_____	_____	_____	_____	_____	_____	_____	_____	_____
Management	_____	_____	_____	_____	_____	_____	_____	_____	_____
Total	_____	_____	_____	_____	_____	_____	_____	_____	_____

FY95% Costed = 100(YTD Actual divided by Latest FY95 Forecast)

Expense Costs/Forecast (K\$)

Total Cost

	LTD Com- mitments	LTD Costs	FY95 Planned	YTD Actual	Latest FY95 Forecast	FY95 % Costed*	FY96 Forecast	Outyears Forecast	Forecast (All Yrs)
Development	_____	_____	_____	_____	_____	_____	_____	_____	_____
ED&I	_____	_____	_____	_____	_____	_____	_____	_____	_____
Const/Insp	_____	_____	_____	_____	_____	_____	_____	_____	_____
Equipment	_____	_____	_____	_____	_____	_____	_____	_____	_____
E'S&H	_____	_____	_____	_____	_____	_____	_____	_____	_____
Asbestos	_____	_____	_____	_____	_____	_____	_____	_____	_____
Management	_____	_____	_____	_____	_____	_____	_____	_____	_____
Total	_____	_____	_____	_____	_____	_____	_____	_____	_____

FY95% Costed = 100(YTD Actual divided by Latest FY95 Forecast)

Current Status/Progress:

Problems/Issues/Concerns (Explain Schedule Slips/Variations from Spend Plan):

Upcoming Events/Action Items/Amount and Dates of Planned Obligations (Awarded Contracts):

Prepared by _____ Date _____

**ATTACHMENT 53
INSTRUCTIONS FOR COMPLETING FYXX PROJECT SUMMARY SHEETS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
1.	<i>Project Summary for Date Ending:</i> Fill in month and year for which information is being supplied.	9.	<i>Construction Management Engineer, Organization:</i> First and last name, organization number. (Titles may be changed to fit appropriate organization.)
2.	<i>Title:</i> Official title of project as it appears on project authorization.	10.	<i>End User Point of Contact, Organization:</i> Primary customer's first and last name and organization. (Titles may be changed to fit appropriate organization.)
3.	<i>Original Funding Year:</i> First year in which funding was received. Format should be FY__.	11.	<i>Technical Area/Building(s):</i> Enter geographical area and building number(s) of project as appropriate.
4.	<i>DOE Directive Number:</i> The 5- or 6-digit number as it appears on project authorization. Format is 92D102 for line items, S7W2D for GPPs, and KAO3B for major renovations. Note: Major renovations under \$150K will not have an authorization number. If there is no authorization number, insert N/A.	12.	<i>Capital Budget (K\$) (Line Items and GPPs) -</i> In the example below, fiscal years are used for illustration. Prior: Cumulative total of capital dollars (by category) from inception through FY94. FY95: Budgeted dollars for FY95 FY96: Budgeted dollars as estimated for FY96 Outyears: Budgeted dollars for all years beyond FY96 Total: Total capital dollars for project by category
5.	<i>Modification Number:</i> Number of latest modification to project authorization.		Note: Project management, construction management, and inspection for GPPs are expense items.
6.	<i>Funding Source:</i> Example: RD&T, S&S, ERWM, FCAP, Major Renovation-Expense.		
7.	<i>Project Manager, Organization, Phone:</i> First and last name, organization number, and phone number.	13.	<i>Expense Budget (K\$) (Line Item, GPP, Major Renovations):</i> See item 12 above.
8.	<i>Design Team Leader, Organization:</i> First and last name, organization. (Titles may be changed to fit appropriate organization.)	14.	<i>Description:</i> Briefly describe work covered in project, including gross square footage and building numbers. If project has more than one phase, describe each phase.

**ATTACHMENT 53
INSTRUCTIONS FOR COMPLETING FYXX PROJECT SUMMARY SHEETS**

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
15.	<i>Justification:</i> A needs statement justifying project from project authorization.		changed to fit appropriate organization.)
16.	<i>How does this project affect other specific projects? How is this project affected by other specific projects?</i> Explain relationship(s) to other projects including schedules where applicable.		Note: Items 18 and 19 indicate two levels of approval. Approval authorities can be tailored to fit a particular organization's procedures or system requirements.
17.	<i>Major Milestones (add or modify significant milestones as appropriate).</i> Shows start and complete dates for various milestones in project. Current baseline shows dates as approved in DOE authorization or most current baseline change proposal. Dates should be shown in month/day/year. Variance is difference in weeks between baseline and actual/anticipated dates.	20.	<i>Project Status for Date Ending:</i> Enter month and year for which information is being supplied.
		21.	<i>Title:</i> Official title of this project as it appears on project authorization.
		22.	<i>Is project authorized?</i> If answer is no, explain why not and when expected. If answer is yes, state when approved, by whom, and any additional pertinent information available.
		23.	<i>Has a project management plan been approved?</i> See item 22 above. For major renovation projects and some GPPs, approved summary sheet serves as a project management plan.
18.	<i>Project Manager Recommendation/Date:</i> Project Manager for this project must sign and date this section. (Titles may be changed to fit appropriate organization.)	24.	<i>Has NEPA documentation been approved?</i> Indicate date of approval, who approved, type of document (i.e., CX, EC, EA, EIS) and tracking number. If not approved, indicate submission date, type of document, and an anticipated authorization date.
19.	<i>Program Manager Approval/Date:</i> Program Manager will approve budget information by signing this section. Any changes to budget information, project scope, and/or milestone dates <u>must</u> be reviewed and approved by Program Manager. (Titles may be	25.	<i>Has safety documentation been approved?</i> Indicate date of approval, who approved, type of document (i.e., none required, SD, SA, SAR), and tracking number. If not approved, indicate submission date, type of document, and an anticipated authorization date.

ATTACHMENT 53
INSTRUCTIONS FOR COMPLETING FYXX PROJECT SUMMARY SHEETS

<u>Item</u>	<u>Instruction</u>	<u>Item</u>	<u>Instruction</u>
26.	<p><i>Capital Costs/Forecast (K\$):</i> Enter capital costs (actuals) in categories provided. Cost information should reflect end of current fiscal period.</p> <p>Note: Project management, construction management, and inspection costs for line items are capital; GPPs and Major Renovations are expense.</p>	30.	<p><i>Upcoming Events/Action Items/Amount and Dates of Planned Obligations (Awarded Contracts):</i> List any upcoming events or action items for project.</p>
27.	<p><i>Expense Costs/Forecast (K\$):</i> Enter expense costs (actuals) in categories provided. Cost information should reflect end of current fiscal period.</p> <p>Note: Project management, construction management, and inspection costs for line items are capital; GPPs and Major Renovations are expense.</p>	31.	<p><i>Prepared by/Date:</i> Name of person submitting information and date form was completed.</p>
28.	<p><i>Current Status/Progress:</i> Briefly indicate the phase the project is in (development, design, construction, closeout), including approximate percent complete. Continue with more specific information regarding status.</p>		
29.	<p><i>Problems/Issues/Concerns (Explain schedule slips/variances from spend plan):</i> Briefly describe issues related to cost, schedule, and/or performance.</p>		

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ATTACHMENT 54

SAMPLE PROJECT SUMMARY FOR MONTH ENDING May 1995

Title: Integrated Manufacturing Design Facility (IMDF)
 DOE Directive Number: S7W4G
 B&R Number: 39GB01010-461-GPD101
 Funding Source: DP RD&T
 Des. Team Ldr., Org.: Phil Pelzman, 7905
 End User Pt. of Cont., Org.: Gary Ferguson, 2509

Original Funding Year: FY94
 Modification No.: Original
 Proj. Mgr., Org., Phone: Pam McKeever, 7903, 4-1223
 Const. Mgmt. Engr., Org.: Ed Sanchez, 7913
 Tech Area: 1
 Building(s): 879

	<i><u>CAPITAL BUDGET K \$</u></i>					<i><u>EXPENSE BUDGET K \$</u></i>					Total
	Prior	FY95	FY96	Outyrs	Total	Prior	FY95	FY96	Outyrs		
ED&I	0	96	0	0	96	Dev	0.0	0.0	0.0	0.0	0.0
Const	0	758	707	0	1,464	ED&I	0.0	25.0	17.5	0.0	42.5
Equip	0	0	0	0	0	Const/Ins	0.0	55.0	17.0	0.0	72.0
Mgmt	0	0	0	0	0	Equip	0.0	0.0	0.0	0.0	0.0
Cont	0	0	0	0	0	E'S&H	0.0	0.0	0.0	0.0	0.0
TEC	0	854	707	0	1,560	Asbest	0.0	0.0	0.0	0.0	0.0
						Mgmt	0.0	24.0	6.0	0.0	30.0
						Cont	0.0	0.0	0.0	0.0	0.0
						Total	0.0	104.0	40.5	0.0	144.5

(Management includes project management and construction management)

Description:

This project consists of a new 9,800 square foot office building for the Product Realization for Weapon Components Center at SNL/NM. The building will be used to collocate project teams, including Purchasing and Accounting functions. It will include office space for approximately 40 to 50 people, a conference room, and various common area space for office use. The building is to utilize the generic GPP design with minor design changes to accommodate specific occupant requirements.

Justification:

The mission to support the weapon stockpile needs for limited-life components and replacement of non-nuclear components will be fulfilled through in-house production and manufacturing development engineering (MDE) which partners with private industry. The key to success is the use of concurrent engineering processes and the development of an infrastructure that allows highly integrated and coordinated teamwork. The proposed building will provide collocation for many of these critical functions. The building will accelerate the integration of these people to emerge with a model production and manufacturing capability that will position Sandia to help fulfill the DOE/DP vision for science-based stockpile stewardship.

How does this project affect other specific projects? How is this project affected by other specific projects?

N/A

Major Milestones (add or modify significant milestones as appropriate):

	<i><u>CURRENT BASELINE</u></i>		<i><u>ACTUAL/ANTICIPATED</u></i>		<i><u>VARIANCE</u></i>
	<i><u>Start</u></i>	<i><u>Complete</u></i>	<i><u>Start</u></i>	<i><u>Complete</u></i>	<i><u>(Weeks)</u></i>
Conceptual Design:	N/A	N/A	N/A	N/A	
Design:	9-20-94	10-15-94	9/20-94	10-15-94	0
Procurement:	10-15-94	12-15-94	10-15-94	12-15-94	0
Construction:	12-15-94	11-15-95	1-15-95	12-15-95	4
Occupancy Design:	9-1-95	11-15-95	9-1-95	11-15-95	0
Occupancy Procurement:	N/A	N/A	N/A	N/A	
Occupancy Construction:	N/A	N/A	N/A	N/A	

Project Manager Recommendation: _____

Date: _____

Program Manager Approval: _____

Date: _____

	Yes	No	If the answer is no, explain why not or when expected. If the answer is yes, state when approved and by whom
Is the Project Authorized?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Authorized by John Themelis on 9-27-94</u>
Has a Project Management Plan Been Approved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>This summary sheet serves as the project plan.</u>
Has NEPA Documentation Been Approved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>(SNA-94-144) has been approved as a CX</u>
Has Safety Documentation Been Approved?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>PA94224-1 approved on 8-12-94; Classified General Use, Non-nuclear</u>
Has a Construction Contract(s) Been Awarded?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Award Date(s): <u>12-20-94</u> Contract No(s): <u>TW-0652</u>

Capital Costs/Forecast (K\$)									Total Cost
	LTD Com- mitments	LTD Costs	FY95 Planned	YTD Actual	Latest FY95 Forecast	FY95 % Costed*	FY96 Forecast	Outyears Forecast	Forecast (All Yrs)
ED&I	57	40	96	40	40	100.0	25	0	65
Construction	1,423	718	758	718	1,199	59.9	224	0	1,423
Equipment	0	0	0	0	0	0.0	0	0	0
Management	0	0	0	0	0	0.0	0	0	0
Contingency	0	0	0	0	0	0.0	72	0	72
Total	1,480	758	854	758	1,239	61.2	61.2	321	1,560

FY95% Costed = 100(YTD Actual divided by Latest FY95 Forecast)

Expense Costs/Forecast (K\$)									Total Cost
	LTD Com- mitments	LTD Costs	FY95 Planned	YTD Actual	Latest FY95 Forecast	FY95 % Costed*	FY96 Forecast	Outyears Forecast	Forecast (All Yrs)
Development	0	0	0	0	0	0.0	0	0	0
ED&I	43	19	25	19	37	51.0	30	0	67
Const/Insp	79	44	55	44	80	54.8	30	0	110
Equipment	0	0	0	0	0	0.0	0	0	0
E'S&H	0	0	0	0	0	0.0	0	0	0
Asbestos	0	0	0	0	0	0	0	0	0
Management	10	6	24	6	8	73.7	3	0	11
Contingency	0	0	0	0	0	0.0	0	0	0
Total	131	68	104	68	125	54.8	63	0	188

FY95% Costed = 100(YTD Actual divided by Latest FY95 Forecast)

Current Status/Progress:

The construction is proceeding well. The outside sheathing is up. Current change orders are less than 1% of the contract award amount.

Problems/Issues/Concerns (Explain Schedule Slips/Variations from Spend Plan):

There is no budget for communications equipment. A meeting with the customers will be scheduled to determine what their needs are and then we will have to see if there is enough money in contingency to cover it.

Upcoming Events/Action Items/Amount and Dates of Planned Obligations (Awarded Contracts):

Construction will proceed.

Prepared by Pam McKeever

Date 6-2-95