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**The Importance  
of Earned Value**

## SOLUTION

- 1.(a) The approximate percent complete can be determined by comparing the budgeted value of work completed versus the total budget authorized. The total budget is given as \$57 million. The budgeted value of work completed is calculated as follows:

Design	\$ 5.0 million (complete)
Manufacturing	\$ 3.2 million (200 units complete, valued at \$16,000 each in the budget)
Assembly & Test	\$ 1.8 million (150 units complete, valued at \$12,000 each in the budget)
Administration:	\$ 2.4 million
Material:	\$ 3.5 million, based on reported material usage
<u>TOTAL:</u>	<u>\$15.9 million</u> , which is 27.9% of the total approved budget of \$57 million

- 1.(b) The percent spent is  $\$22,749,000 / \$57,000,000 = 39.9\%$ . Assuming the estimate of funds required to be equal to the budget authorized (\$57 million), the project has expended 40% of the funds.

- 1.(c) The planned accomplishment can be determined by comparing the budgeted value for work planned versus the total budget authorized.

Design:	\$ 5.0 million
Manufacturing:	\$ 8.0 million (500 units were planned to be complete at a budgeted value of \$16,000 each)
Assembly & Test:	\$ 3.6 million (300 units were planned to be complete at a budgeted value of \$12,000 each)
Administration:	\$ 2.4 million
Material:	\$ 9.5 million
<u>TOTAL:</u>	<u>\$28.5 million</u> , which is 50.0% of the total approved budget of \$57 million, therefore the project should be 50% complete.

2. Every project has good news and bad news, but on this one the bad news predominates. While the project has been below the spend plan to date, it is also significantly behind schedule in terms of work accomplished. The project is only 28% complete versus 50% scheduled to be complete. With 40% of the funds expended to complete 28% of the work, it is also highly likely that a significant cost overrun will occur. The only good news is that Design has been completed as planned and staffing/expenditures are on target for Administrative Support.
3. A real life problem exists here because you are in the uncomfortable position of identifying that the rising star that you replaced has just been promoted based upon a weak evaluation of an objective project status by management. This can be defused somewhat by shifting the emphasis from the prior manager to the lack of adequate system visibility and reporting. The point should be made that without earned value, there is no objective basis for evaluating project progress. Specific recommendations would include:
- (1) Implement an earned value reporting system immediately. The necessary information apparently exists within the available reports, but it is not being objectively analyzed and integrated.

- (2) Initiate corrective action within manufacturing immediately. This is the root cause of the behind schedule condition, since a delay with manufacturing prevents Assembly & Test from maintaining its schedule. Additionally, this means that material is not being used. The material is available on site, so the problem is more one of a material usage issue than material ordering/availability.
- (3) Integrate cost reporting with the analysis. There are no actual costs reported except at a total project level, based on the available information. Consequently, we cannot determine where the cost overrun is occurring. We can only suspect that it might be in manufacturing.