

Your company has received a request for proposal (RFP) from one of your customers and management has decided to submit a bid. Only one department in your company will be required to perform the work and the department manager estimates that 3,000 hours of *direct* labor will be required.

Your first step is to calculate the number of hours available in a typical man-month. The Human Resources Department provides you with the following *yearly* history for the average employee in the company:

- Vacation (3 weeks)
  - Sick days (4 days)
  - Paid holidays (10 days)
  - Jury duty (1 day)
- A. How many direct labor hours are available per month per person?
  - B. If only one employee can be assigned to the project, what will be the duration of the effort, in months?
  - C. If the customer wants the job completed within one year, how many employees should be assigned?

## CASE STUDIES

### THE BATHTUB PERIOD

The award of the Scott contract on January 3, 2010, left Park Industries elated. The Scott Project, if managed correctly, offered tremendous opportunities for follow-on work over the next several years. Park's management considered the Scott Project as strategic in nature.

The Scott Project was a ten-month endeavor to develop a new product for Scott Corporation. Scott informed Park Industries that sole-source production contracts would follow, for at least five years, assuming that the initial R&D effort proved satisfactory. All follow-on contracts were to be negotiated on a year-to-year basis.

Jerry Dunlap was selected as project manager. Although he was young and eager, he understood the importance of the effort for future growth of the company. Dunlap was given some of the best employees to fill out his project office as part of Park's matrix organization. The Scott Project maintained a project office of seven full-time people, including Dunlap, throughout the duration of the project. In addition, eight people from the functional department were selected for representation as functional project team members, four full-time and four half-time.

Although the workload fluctuated, the manpower level for the project office and team members was constant for the duration of the project at 2,080 hours per month. The company assumed that each hour worked incurred a cost of \$120.00 per person, fully burdened.

At the end of June, with four months remaining on the project, Scott Corporation informed Park Industries that, owing to a projected cash flow problem, follow-on work would not be awarded until the first week in March (2011). This posed a tremendous problem for Jerry Dunlap because he did not wish to break up the project office. If he permitted his key people to be assigned to other projects, there would be no guarantee that he could get them back at the beginning of the follow-on work. Good project office personnel are always in demand.

Jerry estimated that he needed \$240,000 per month during the "bathtub" period to support and maintain his key people. Fortunately, the bathtub period fell over Christmas and New Year's, a time when the plant would be shut down for seventeen days. Between the vacation days that his key employees would be taking, and the small special projects that his people could be temporarily assigned to on other programs, Jerry revised his estimate to \$200,000 for the entire bathtub period.

At the weekly team meeting, Jerry told the program team members that they would have to "tighten their belts" in order to establish a management reserve of \$200,000. The project team understood the necessity for this action and began rescheduling and replanning until a management reserve of this size could be realized. Because the contract was firm-fixed-price, all schedules for administrative support (i.e., project office and project team members) were extended through February 28 on the supposition that this additional time was needed for final cost data accountability and program report documentation.

Jerry informed his boss, Frank Howard, the division head for project management, as to the problems with the bathtub period. Frank was the intermediary between Jerry and the general manager. Frank agreed with Jerry's approach to the problem and requested to be kept informed.

On September 15, Frank told Jerry that he wanted to "book" the management reserve of \$200,000 as excess profit since it would influence his (Frank's) Christmas bonus. Frank and Jerry argued for a while, with Frank constantly saying, "Don't worry! You'll get your key people back. I'll see to that. But I want those uncommitted funds recorded as profit and the program closed out by November 1."

Jerry was furious with Frank's lack of interest in maintaining the current organizational membership.

### QUESTIONS

- a. Should Jerry go to the general manager?
- b. Should the key people be supported on overhead?
- c. If this were a cost-plus program, would you consider approaching the customer with your problem in hopes of relief?
- d. If you were the customer of this cost-plus program, what would your response be for additional funds for the bathtub period, assuming cost overrun?
- e. Would your previous answer change if the program had the money available as a result of an underrun?
- f. How do you prevent this situation from recurring on all yearly follow-on contracts?

### FRANKLIN ELECTRONICS

In October 2013 Franklin Electronics won an 18-month labor-intensive product development contract awarded by Spokane Industries. The award was a cost reimbursable contract with a cost target of \$2.66 million and a fixed fee of 6.75 percent of the target. This contract would be Franklin's first attempt at using formal project management, including a newly developed project management methodology.

Franklin had won several previous contracts from Spokane Industries, but they were all fixed-price contracts with no requirement to use formal project management with earned value reporting. The terms and conditions of this contract included the following key points:

- Project management (formalized) was to be used.
- Earned value cost schedule reporting was a requirement.