Relevant Cost Case Behemoth Motors Corp.

Behemoth Motors Corp. (BMC) is a major manufacturer of automobiles in the United States.  BMC has decided to include a Global Positioning System navigator (GPSN) in all of its Sports Utility Vehicles (SUV) beginning with the 2002 model year.  These models are just now being delivered and the GPSN units are manufactured in the Detroit BMC facility.  Currently and for the foreseeable future, BMC will need 8,000 GPSNs per month.  The total manufacturing cost of the GSPN is $425 per unit calculated as follows:

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| --- | --- |
| **Item**  | **Cost per unit**  |
| Direct materials (purchased locally) | $165 |
| Direct labor (6 hours @ $28 per hour) | 168 |
| Factory Floor Space Charges (16,000 sq. ft. at $2.50 per sq. ft. per month allocated over 8,000 units per month) | 5  |
| Supervisory labor (monthly cost of $56,000 allocated over 8,000 units per month) | 7  |
| General company overhead ($640,000 per month assigned to GPSN allocated over 8,000 units per month) | 80 |
| Total Unit Cost | $425 |

BMC experiences a high level of quality control over these units with only 2% of total production failing quality control testing.  98% of all units manufactured are installed in SUVs.

Wally Wizard, the GPSN manager, has been approached by Far East Enterprises, Ltd (FEE) who has offered to outsource these units for MBC.  FEE is a three-year-old electronic manufacturing company located in Thailand and has experienced outstanding growth during that three-year period.  FEE has offered to manufacture and deliver to Detroit 8,000 GPSN units at a unit cost of $395 beginning on July 1, 2007.  FEE asks for a two-year contract.

Under the existing arrangement, the direct materials are all purchased locally under month-to-month contracts.  There are no future obligations under these contracts.

There are 100 direct labor employees involved in this process.  These employees can be laid off but if they are, BMC must pay a penalty of $64,000 per year to the employees union.  This penalty will continue for 5 years.

There are 10 supervisors, each earning $5,600 per month, assigned to the project.  If the product is outsourced, all of these supervisors can be assigned to other supervisory positions within BMC.

If the product is outsourced, half of the factory floor space can be used for storage for materials that are currently stored in rented storage facilities.  These rented facilities currently cost BMC $4,000 per month.  There is no alternative use for the remaining factory floor space.  The current $2.50 per sq. ft. charge is based on the overall BMC factory costs.

General company overhead is first assigned to operating units on the basis of total product produced and then further to produced units on a per unit basis.  If the product is outsourced, this overhead will be reassigned to other operating divisions although total corporate overhead incurred will remain unchanged.

You have determined the following additional facts.  The units manufactured by FEE will have the same quality as those manufactured by BMC and the delivery schedule will have the same reliability as that of BMC.