



Comptroller General  
of the United States  
Washington, D.C. 20548

# Decision

**Matter of:** Aircraft Porous Media, Inc.  
**File:** B-241665.2; B-241665.3  
**Date:** April 8, 1991

Paul Mishkin, Esq., Bruce A. McAllister, Esq., and Kathleen Imholz, Esq., Mishkin, O'Neil & McAllister, for the protester. Paul Shnitzer, Esq., and Robert P. Davis, Esq., Crowell & Moring, and Robert L. Freeburn II, for Guild Associates, Inc., an interested party. Craig B. Hodge, Esq., and Phillip B. Hunter, Esq., Department of the Army, for the agency. Ralph O. White, Esq., and Christine S. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

## DIGEST

1. Agency's contention that protester was not injured by agency's failure to accept entire cost reduction in protester's best and final offer since agency could have chosen not to recognize any part of the reduction due to protester's limited explanation, is without merit because the agency is required to perform a reasonable cost realism analysis and the record reflects that protester's explanation was adequate to put agency on notice that a reduction in effort was justified due to the overlap between the instant effort and a similar effort in which the protester is involved.
2. Protester's argument that agency's cost realism analysis was unreasonable is denied where, arguments presented during the course of the protest establish that the agency's decision was reasonable, even though the contemporaneous selection decision documents provide no rationale for the decision to recognize some, but not all, of the protester's reductions in its best and final offer.
3. Protester's contention that the evaluation panel unreasonably failed to consider its work on a similar effort conducted as part of an independent research and development (IR&D) effort with another contractor in analyzing proposed cost reductions in protester's best and final offer (BAFO) is denied where the protester's explanation for its BAFO reductions provides information regarding the overlap between

the instant effort and a similar research and development (R&D) effort, but provides no suggestion that the evaluators should recognize the relationship between the similar R&D effort indicated and the previous IR&D effort.

4. Protester's assertion that the agency cost realism analysis was unreasonable because it did not consider the cost impact of royalties to be paid to protester by awardee for infringement of protester's patents is without merit where assertion is based on mere speculation and agency and awardee deny that any infringement of protester's patents exists.

5. Despite protester's contention to the contrary, agency properly considered technical effect of changes proposed in protester's best and final offer and reasonably concluded that no change should be made to protester's superior merit score as a result of its role as a subcontractor on a related effort.

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#### **DECISION**

Aircraft Porous Media, Inc. (APM) protests the award of a contract to Guild Associates, Inc. pursuant to request for proposals (RFP) No. DAAA15-90-R-1043, issued by the Department of the Army for the design, fabrication, and testing of four air filtration devices for nuclear, biological, and chemical contaminants based upon Pressure Swing Adsorption (PSA) technology. APM contends that the Army improperly awarded the contract to Guild after conducting an unreasonable cost realism analysis. According to APM, the Army's cost realism analysis was unreasonable because the Army refused to accept the cost reductions included in APM's best and final offer (BAFO), and because the Army failed to consider the cost of patent royalties required to be incurred by the awardee. APM also argues that the Army did not evaluate APM's BAFO in accordance with the stated evaluation criteria.

We deny the protests.

#### **BACKGROUND**

The Army issued the RFP on April 17, 1990, seeking offerors to design, fabricate, and test four full-size air filtration devices based upon PSA technology. These PSA air filtration devices provide a clean, safe air supply to contained environments by removing nuclear, biological, and chemical contaminants from outside air. The technology at issue

involves regenerable pressure swing adsorption,<sup>1/</sup> which, in part, uses changes in pressure between two or more vessels to cleanse and purify contaminated air. In essence, the PSA system adsorbs contaminants by forcing adulterated air at high pressure through multiple filter beds, while other filter beds are purged, or cleansed, using low pressure filtered air.

Two of the four air filtration devices to be purchased here will be used to validate a mathematical model for describing the operation of such units.<sup>2/</sup> The other two devices will be integrated with another system under development that will be discussed in greater detail below.

The RFP advised offerors that proposals would be evaluated using three factors; technical, management, and probable cost. The technical factor was one and a half times as important as the management factor; after scoring, the technical and management factors were to be combined into a merit rating. The RFP further advised that the Army would perform a cost realism analysis to determine the most probable cost, and that the merit rating was more important than cost; however, section M.3.3 of the RFP explained that probable cost would ". . . become more significant in the event that competing merit ratings are closely grouped and offer comparable merit contributions to the Government."

Three offerors responded to the Army's solicitation. One offeror's proposal was found technically unacceptable; thus, only APM and Guild were included in the competitive range. After completion of two rounds of technical discussions--each followed by submission of revised proposals by both APM and Guild--the Army determined that the proposals were technically equal, since both had received superior merit ratings. The Army also concluded that there was little room for improvement in either proposal.

After the second round of technical discussions, the Army conducted cost negotiations with the two offerors. Based on these negotiations, APM lowered its proposed cost slightly, while Guild raised its cost slightly. At this point, the contracting officer determined that both offerors' proposed costs were fair and reasonable: APM's proposed cost was

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<sup>1/</sup> Adsorption, as opposed to absorption, involves the adhesion--in extremely thin layers--of gases, liquids, or solutes to the surfaces of solid bodies or liquids with which they come in contact.

<sup>2/</sup> Hence, on the face of the solicitation, and in technical literature, this procurement is referred to as the Pressure Swing Adsorption Math Model Validation contract.

\$2,058,097; Guild's proposed cost was \$1,905,683. Having completed technical and cost negotiations, the Army requested the submission of BAFOs.

Although Guild's BAFO made no change in its proposed cost, APM's BAFO included a cost reduction of \$200,143, lowering its proposed cost to \$1,857,954. APM explained that its lowered cost was due to three adjustments: a reduction in the fee charged the government for performance; a reduction in proposed travel costs; and a reduction in proposed engineering hours from 11,830 to 10,000. APM's reduction in engineering hours--the largest contributing factor to its cost reduction--was explained in its BAFO as a logical consequence of APM's selection as a subcontractor on a related effort.

In its cost realism analysis of APM's BAFO, the Army concluded that APM's proposed reduction of 1,830 engineering hours was unjustified and excessive. Although the Army agreed that there would be some overlap between this procurement and the related effort, it estimated that the number of engineering hours should only be reduced by approximately 600. As a result, the Army added back to APM's offer the cost of approximately 1,230 engineering hours, or \$103,884. Based on this analysis, APM's most probable cost was calculated to be \$1,961,838, while no adjustment was made to Guild's proposed cost of \$1,905,683. Since both proposals were considered technically equal, and both were rated superior, the contracting officer selected the Guild proposal on the basis that it offered the lowest probable cost to the government. This protest followed.

#### COST REALISM ANALYSIS

APM challenges the Army's award decision on the grounds that the cost realism analysis performed by the Army was unreasonable. According to APM, the Army improperly adjusted APM's BAFO, making it more expensive than Guild's, by not accepting APM's proposed reduction in engineering hours. APM also argues that the Army failed to consider the cost of patent royalties that will have to be paid by Guild to APM if Guild performs the contract.

#### Engineering Hours

APM explains that it deleted 1,830 engineering hours from its proposal, thus reducing its BAFO cost by more than \$200,000, because of the "synergy" between this procurement and a related Army research and development effort, both of which would involve APM if it received this contract. Specifically, the instant procurement, conducted by the Army's Chemical Research, Development and Engineering Center (CRDEC), is related to an effort undertaken by the Army's Belvoir

Research, Development and Engineering Center (BRDEC). Under the BRDEC procurement, the Army seeks development of advanced air filtration technology for use in combat vehicles. The scope of work in that procurement requires the contractor to design and produce an auxiliary powered environmental control system (APECS) for such vehicles that includes a PSA air filtration device. The PSA air filtration device for BRDEC's APECS system is being provided by APM through a second-tier subcontract for that effort. Similarly, the scope of work here requires the successful offeror to integrate two of the four PSA units produced under this contract into the APECS systems provided as government furnished equipment--the source of which is the BRDEC contract.

According to APM, it learned it would be providing its PSA air filtration unit for the BRDEC effort on September 19, immediately prior to submission of its BAFO on this procurement. As a result, APM removed 1,830 engineering hours from its technical proposal in its BAFO because they would be unnecessary since APM would already have provided--and presumably integrated--a PSA for the APECS system under the BRDEC contract. In its BAFO letter, APM explained the situation as follows:

"(1) We have recently been advised that PSA-APM has been selected as the subcontractor for the [PSA] filtration system for the winner of the [APECS][3/] contract which is MicroTurbo, Inc., Toulon, France. PSA-APM will be the subcontractor to FMC who will supply the Regenerable Collective Protection System (RCPS) to MicroTurbo for the APECS. . . .

"(2) PSA-APM believes that the synergism between the two contracts, (APECS and PSA Math Model Validation), will allow us to significantly reduce the engineering hours that would have been required if, we were to have been selected for only the PSA Math Model Validation program. Therefore, we have reevaluated and now estimate our engineering hours to be 10,000 and have subsequently reduced our costs accordingly."

Upon receipt of APM's BAFO, the Army concluded that APM's reduction was not adequately explained or supported, and that

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3/ The APECS acronym used by APM in its BAFO letter is slightly different from the definition provided in the discussion above. We have adopted the definition provided in the statement of work for this procurement--i.e., auxiliary powered environmental control system.

the Army would have to conduct its own analysis to determine the extent of the overlap. Based on its evaluation, the Army agreed that there was some overlap between APM's role in the BRDEC procurement and the work here, but concluded that APM had overstated the proposed savings. After the evaluation panel estimated the amount of the overlapping effort at 300 to 600 engineering hours, the contracting officer added back to APM's BAFO the portion of the engineering hours in excess of the 600 hour reduction the Army considered reasonable.

APM's complaint, in summary, is that the Army should have accepted APM's reduction in engineering hours because APM's explanation for the reduction in its BAFO was adequate for an understanding of the relationship between the two efforts, given the Army's role in both efforts, and that the Army's decision to allow a reduction of only 600 engineering hours was arbitrary and unjustified.

When an agency evaluates proposals for the award of a cost reimbursement contract, an offeror's proposed estimated costs of contract performance are not considered controlling, since they may not provide valid indications of the actual costs that the government is, within certain limits, required to pay. See Federal Acquisition Regulation (FAR) § 15.605(d); Electronic Warfare Integration Network, B-235814, Oct. 16, 1989, 89-2 CPD ¶ 356. Consequently, an agency's evaluation of estimated costs properly should consider what the contract should cost, assuming reasonable economy and efficiency. Arthur D. Little, Inc., B-229698, Mar. 3, 1988, 88-1 CPD ¶ 225. When reviewing an agency's cost realism analysis, we consider whether the evaluation was reasonably based and not arbitrary. Pan Am World Servs., Inc. et al., B-231840 et al., Nov. 7, 1988, 88-2 CPD ¶ 446.

In response to APM's protest, the Army first argues that APM must bear the responsibility for having made changes to its previously acceptable proposal in its BAFO without sufficient support for the changes, especially since APM was given both oral and written warning against making such changes without full explanation.<sup>4/</sup> The Army explains that APM's BAFO changes consisted of reducing the engineering hours in its proposal to the "suspiciously round" number of 10,000, and that with so little support for the reduction, the Army could have rejected

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<sup>4/</sup> The Army's warnings to APM were given in response to a comment made by an APM representative that its BAFO would "knock your socks off!" This characterization of APM's representative's comment was included in the agency report on this protest and in documents appended to the report, and was based on contemporaneous notes of the conversation. APM did not challenge the characterization of the comments.

APM's BAFO changes entirely. Since the Army permitted a portion of the reduction when, in its view, it could have rejected the entire reduction proposed by APM, the Army argues that APM has suffered no injury.

Offerors who include inadequately explained cost reductions in their BAFOs on cost reimbursable procurements do so at their own peril. See The EC Corp., B-238505, May 30, 1990, 90-1 CPD ¶ 509; Ferranti Int'l Defense Sys., Inc., B-237555, Feb. 27, 1990, 90-1 CPD ¶ 239. APM argues, however, that the explanation here was more than adequate given the fact that the CRDEC technical personnel involved in the procurement are familiar with both this effort and the BRDEC effort.

Although we find that APM should have provided a more detailed explanation of the reduction taken in engineering hours, we disagree with the Army's contention that APM's BAFO explanation was wholly inadequate. In one sense, APM's explanation, quoted above, served its purpose: it alerted the evaluation panel to the overlap between the BRDEC and CRDEC contracts if APM provided the PSA device for both efforts. Having been alerted, the evaluation panel agreed with APM's conclusion regarding the overlap, but disagreed with APM's conclusion regarding the concomitant reduction in engineering hours as a result of the overlap. In our view, since the evaluators understood the explanation and recognized the overlap, the Army could not have ignored this information and fulfilled, at the same time, its obligation to perform a reasonable cost realism analysis prior to awarding a cost-type contract. Thus, the Army cannot avoid scrutiny of its award decision here by arguing that there has been no injury to the protester.

Turning to the Army's decision to accept only one-third of APM's BAFO reduction, the first support or rationale for the Army's conclusion came in its comments on the informal administrative conference held on this protest. APM initially argued that the failure of the Army to include in the contemporaneous evaluation documents a rationale for its cost realism determination requires that we overturn the agency decision. See FAR § 15.612(d)(2); Amtec Corp., B-240647, Dec. 12, 1990, 90-2 CPD ¶ 482, aff'd, B-240647.2, Feb. 26, 1991, 91-1 CPD ¶ \_\_\_\_\_. In reviewing such determinations we look at the entire record, including statements and arguments made in response to a protest, so that we may determine whether the particular decision is supportable--our review is not limited to whether the selection was properly

supported at the time it was made,<sup>5/</sup> Burnside-Ott Aviation Training Center, Inc.; Reflectone Training Sys., Inc., B-233113; B-233113.2, Feb. 15, 1989, 89-1 CPD ¶ 158.

Here, the Army's original evaluation documents (all of which were provided to the protester with minor deletions) contain only the evaluation panel's conclusion that 300 to 600 engineering hours is a more appropriate reduction due to the overlapping efforts than the 1,800 hour reduction claimed by APM.<sup>6/</sup> In its post-conference comments, the Army stated that the evaluation panel based its conclusion on a comparison of the effort required in this contract with a similar CRDEC contract ". . . for the integration of a regenerative air purification system provided by one contractor with an environmental control unit provided by another contractor."

APM responded to the Army's post-conference comments with an affidavit from a technical expert claiming, in essence, that there were no CRDEC contracts in this area sufficiently similar to the instant procurement to justify the conclusion reached by the evaluation panel in this case. Since that time, both parties have submitted additional pleadings, a fact-finding hearing was convened, and the Army has abandoned the initial rationale offered for its decision.<sup>7/</sup> Rather than address every defense raised by the Army during this protest,

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<sup>5/</sup> Our willingness to consider information developed during a protest is not without limits. In this case, after submission of the agency report, an informal administrative conference, comments and additional pleadings, a fact-finding hearing based on the pleadings filed after the informal conference, and comments on the fact-finding hearing, the Army gathered a team of experts to reevaluate the protester's BAFO submission. The resulting materials, submitted far too late for reasoned consideration by our Office, or by the protester, were not considered in the preparation of this decision.

<sup>6/</sup> In fact, the Army's evaluation materials offer fewer details explaining its estimate than APM offered in its BAFO letter to support the reduction claimed therein.

<sup>7/</sup> During the fact-finding hearing on this protest, the Army's technical witness responded during questioning that the claimed consideration of a similar CRDEC contract at the time of the Army's review of APM's BAFO did not occur; the claimed comparison was made after this protest was filed, and did not form the basis for the Army's decision to add engineering hours back to APM's BAFO.



many of which were effectively refuted by the protester,<sup>8/</sup> we will discuss here only the issues that lead us to conclude that the Army's decision to add 1,230 hours back to APM's BAFO was reasonable.

#### The Dugway Effort

Much of APM's focus in this protest has been that the Army should have known APM's estimate of the engineering hours was reliable because of APM's previous experience in an effort of which the Army was aware. Specifically, APM argues that the evaluation panel acted unreasonably in not considering APM's prior integration efforts with FMC in a project referred to in the hearing as "the Dugway effort." According to APM, the Army's failure to consider this effort was unreasonable given the previous involvement of at least one evaluation panel member in discussions and briefings regarding the project.

The Dugway effort involved integration of a PSA device by APM and FMC as part of an independent research and development (IR&D) endeavor. The integrated system produced by that effort has been delivered to the Army's Dugway Proving Ground for live agent testing. As its name suggests, live agent testing involves testing the units using actual chemical warfare agents. During the hearing on this protest, the Army's technical witness stated that he had been aware of this integration effort, and had even attended a briefing for Army officials in November 1989. During the hearing, APM also established that the contracting team of APM and FMC mentioned in their November 1989 briefing that the joint integration effort had required 3,700 engineering hours.

Despite these facts, we are not persuaded that the Army's cost realism decision should be overturned for not explicitly considering the Dugway effort. Simply put, APM's contentions require too much of agency evaluators and too little of offerors.

First, we note that the Dugway effort is not the effort to which APM referred when it claimed a "synergy" between the BRDEC and CRDEC contracts. The BAFO explanation stated that ". . . the synergism between the two contracts, (APECS and PSA

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<sup>8/</sup> For example, the Army explains that its judgment is supported by a comparison of the integration effort here with the integration of a regenerable temperature swing adsorption (TSA) unit with an APECS. APM has effectively refuted this argument with a detailed discussion of the comparative simplicity of integrating such a TSA unit, as opposed to the PSA unit here. Having reviewed the Army's response on this point, we find APM's arguments persuasive.

Math Model Validation), will allow us to significantly reduce the engineering hours that would have been required if, we were to have been selected for only the PSA Math Model Validation Program." To grasp fully the impact of the synergy between these two efforts, APM's explanation required two logical steps; one had to first understand the interplay between the CRDEC and BRDEC efforts; and then, one had to understand that the BRDEC effort may have benefited from an earlier IR&D effort, the Dugway effort, between the prime contractor's first and second tier subcontractors--FMC and APN. Although APM could safely assume that the Army evaluators would easily understand the synergy between the BRDEC and CRDEC contracts--given the requirements of the statement of work and the questions asked of APM during discussions--APM's assumption that the panel would intuitively associate the BRDEC effort with a third endeavor, the Dugway effort, goes too far. APM's BAFO explanation provides no hint that one must consider the effect of this third endeavor on the BRDEC contract. In our view, this is an omission for which APM, not the Army, must bear responsibility.

Second, at the time APM submitted its BAFO, it had no way of knowing the composition of the Army's evaluation panel. APM's arguments assume that members of the panel would be aware of these efforts, that at least one of the panel members was present at the November 1989 briefing, and that any panel member who was present would remember, for more than a year, the number of hours involved in the integration. While it is true that the Army's technical witness was aware of this effort--and had attended the November 1989 briefing on the subject--it is not clear, for the reasons stated above, that he should have associated this effort with the BRDEC contract. We also do not believe that the Army's technical personnel must remember matters so minute as the mention of the engineering hours required for integration from a briefing given a year earlier, and apply that information favorably to APM's BAFO--again, with no hint from APM that the panel should consider such information. Accordingly, we cannot conclude that the cost realism analysis was unreasonable for failure to consider the number of engineering hours required in the Dugway effort.

#### The Army's Other Considerations

In addition to asserting that the Army failed to consider things it should have, APM also argues that the things the Army did consider could not support its decision. We disagree. Although the Army initially offered no support for its decision, in response to APM's challenges the Army produced an affidavit from the chairman of its technical evaluation panel. In his affidavit, the evaluation panel chairman explained that the panel considered specific factors

relating to the integration effort. Among these factors were matters related to the design of the PSA devices, matters related to the integration of the PSA devices with environmental control units, and design issues related to the integration of such devices for use with auxiliary powered units.<sup>9/</sup> This explanation of the panel's considerations is consistent with the testimony of the Army's technical witness, who also served on the evaluation panel, and in our view, is sufficient to establish that the Army's adjustment to APM's BAFO was reasonable. Burnside-Olt Aviation Training Center, Inc.; Reflectone Training Sys., Inc., B-233113; B-233113.2, supra. There has been no showing that any of these considerations were inappropriate or inapposite to the Army's cost realism determination. Although the Army's presentation contains relatively little detail, because so little information was provided in APM's BAFO to explain its estimated cost reduction, we believe that the Army's analysis was sufficient to provide a reasonable basis for accepting only a reduction of 600 engineering hours.

#### Patent Infringement Costs

APM's second challenge to the validity of the Army's cost realism analysis focuses on whether the Army considered certain patent royalty costs that APM claims will be incurred by Guild in the performance of this contract. Guild responds that it is not aware of any patent right of APM's that it would violate in performing this contract, and that it can successfully perform the required development effort using established technologies that have been reported in technical literature for more than 20 years. The Army claims that it, too, is unaware of any APM patent that would be infringed as a result of Guild's performance.

APM's challenge here requires the Army to anticipate a patent infringement--an infringement that the awardee denies will occur--and add the costs of royalties, or penalties, arising from such infringement to the awardee's offer. For our Office to conclude that the Army's cost realism analysis was inadequate in this regard, we also would be forced to anticipate such a claim, which we will not do. A potential for patent infringement does not provide a basis for objection to award. As we have recognized, 28 U.S.C. § 1498 (1988) gives patent holders an adequate and effective remedy for patent infringement, while saving the government from having its procurements delayed pending litigation of patent disputes. Fairchild Weston Sys., Inc., B-229568.2, Apr. 22, 1988, 88-1 CPD ¶ 394.

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<sup>9/</sup> See Affidavit of David H. Reed, Chairman, Ad Hoc Evaluation Committee, January 30, 1991, paragraphs 4.B.-4.E.

## EVALUATION OF APM'S PROPOSAL

APM next argues that the Army failed to evaluate its proposal properly because it did not perform a technical reevaluation of APM to consider information provided in its BAFO-- specifically, that APM would be a second-tier subcontractor on the BRDEC contract. The Army responds that the evaluation materials, on their face, state that the evaluation panel concluded that no change was required to APM's technical ratings due to this information because APM had already received the maximum available score in areas affected by its role as a subcontractor on the BRDEC contract. According to the Army, the only areas where APM received less than the maximum score--the personnel and facilities subfactors of the management factor--were not affected by its BAFO reduction in engineering hours.

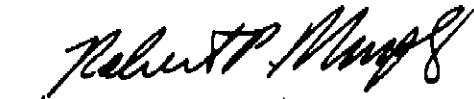
In response to the Army, APM argues that the evaluators should have adjusted its score in the personnel area as a result of its BAFO submission, and that even in the areas where APM had received the maximum score, reevaluating APM's BAFO would have changed the relative standing of the offerors. We do not agree. First, as stated above, APM received the maximum score possible in every area, except personnel and facilities. Despite APM's arguments to the contrary, its selection as a subcontractor on the BRDEC contract did not mean the Army was required to raise APM's score in either of these areas. For example, we fail to see how a reduction in the number of proposed engineering hours relates to whether APM's personnel were sufficiently skilled.

A review of APM's BAFO letter of September 21 substantiates our findings here. APM itself apparently believed that only the three changes presented in its BAFO were related to its proposed cost: it explained the three changes in terms of the corresponding reduction in its proposed costs; and it made no mention of how any such change would improve the merit of its proposal. Sharing APM's view that these matters were predominantly related to its proposed cost, the Army proceeded to perform a cost realism analysis using the BAFO information, discussed in detail above. Based on our review of the record, including APM's arguments, we conclude that the Army's technical evaluation of APM, both before and after submission of its BAFO, was reasonable.

With respect to APM's speculation that a reevaluation of its BAFO would have changed the relative standing of the offerors, we note that APM received a merit rating of 95 out of 100, while Guild's rating was 98. If we assume that APM would be awarded every point available, the point spread between APM and Guild then would be even closer than it is now--i.e., APM

would have a perfect score of 100, while Guild would have a score of 98. If APM and Guild were viewed as technically equal when their merit scores were three points apart, we have no reason to believe APM would be viewed as technically superior if their scores were only two points apart. It thus is extremely unlikely that such a rescoring--even if merited--would change the Army's determination that APM and Guild were technically equal, or that award should be based on lowest probable cost.

The protests are denied.

  
James F. Hinchman  
General Counsel