

IMPROVING PROFITS THROUGH PRIME/SUBCONTRACTOR VALUE ENGINEERING

By K. R. Thorson and R. Snidar

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Preface

Since adoption of the value engineering provisions of the then Armed Services Procurement Regulations, many prime contractors have been able to increase earnings substantially through the submission and acceptance of value engineering change proposals (VECPs). A similar potential exists in the prime/subcontractor interface as a result of the subcontractor VE incentive clause pass-through mandated in the prime's VE clause. However, such clauses for cost reduction appear to be inadequately exploited.

This manual was compiled on the assumption that an improved level of profitability for both prime and subcontractor can be achieved where there is an improved understanding and a wider application of contractual VE incentives.

Preparation of this manual was initiated through an ad hoc committee of concerned value engineering professionals, all members of SAVE, representing both industry and the Department of Defense. The contents are intended to be instructional and have not been specifically endorsed as such by any of the parent companies or agencies from which the committee was drawn. Questions or comments may be addressed to the SAVE national office or to either of the following principals of this committee¹:

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¹ As of this 2011 revision, Keith R. Thorson and Richard Snidnar have retired and are no longer members of SAVE International. The contact information provided herein for them is obsolete.

I. Introduction

A. Purpose of this Manual

This manual has been prepared to acquaint interested prime contractors with the subject benefits and to improve guidelines by which they may be attained. While primarily intended for subcontractors, the manual should also prove useful to subcontractors/suppliers who may be unfamiliar with value engineering incentives. It can also serve as a tool for the supplier in the negotiation of suitable VE incentives with a prime contractor.

A number of prime contractors have recognized the potential for cost reduction by suppliers; however, in their attempt to use subcontractor VE clauses they have been frustrated by the problems encountered and have been disappointed by the results. A great many more have either failed to recognize the potential benefits or have avoided the use of such clauses because of the unsuccessful efforts of others. A few companies have managed to realize benefits from VE clauses which greatly exceeded the effort invested; their experience and counsel is collated herein.

B. Scope

The value engineering contractual provisions of the Defense Acquisition Regulation (Part 17) and their successor Federal Acquisition Regulation (Part 48), prescribe the use of both incentive clauses (VEI) and program requirements clauses (PRC). VEI clauses are voluntary on the part of the contractor, while the PRC constitutes a line item of work which is funded in the contract and is mandatory on the part of the contractor. The PRC-type of clause could be extended to the prime-subcontractor interface, whether or not a prime has a similar clause with the government, and might be a useful incentive to reduce costs. The rewards of a PRC are more modest than a VEI, and the contracting mechanisms appear to be more straightforward. The aerospace and electronics industry VE community has little evidence that the PRC is being used in the prime-supplier interface; therefore, this manual is directed at the VEI clause approach where the rewards for slightly increased risks are more generous.

This manual focuses on the initial, essential step: namely, the establishment of contractual incentives and mutual working relationships between prime and subcontractor that will stimulate submission and acceptance of value engineering change proposals. A principal measure of the success of a prime/subcontractor value engineering program is the quantity and quality of value engineering change proposals (VECPs) that are successfully and profitably negotiated between them. The preparation and acceptance of VECPs is a most vital end product of this relationship and is also treated briefly herein.

C. Definitions

A few definitions may be helpful to the reader who is unfamiliar with contractual aspects of value engineering.

Instant Contract. The instant contract shall be the order under which the VECP is submitted and accepted.

Future Acquisition. Subsequent orders (contemplating the utilization of a VECP) placed after acceptance of the VECP.

Concurrent Contract Savings. Those measurable net reductions in prices of other contracts or orders of the same prime contractor in existence at the same time the VECP was accepted and which are the result of incorporation of the VECP.

Collateral Costs. Those costs incurred by the prime or prime's customer in the operation, maintenance, logistic support, or customer-furnished property.

Development Cost. The cost of developing the VECP. These are the costs incurred after a specific VE projects has been identified.

Implementation Cost. All costs of incorporating a change which is incurred after the VECP has been accepted.

Seller, Subcontractor, Vendor, Supplier. Used interchangeably in this manual.

Buyer, Prime, Prime Contractor. Used interchangeably in this manual except that the term *buyer* may imply the specific purchasing agent of the prime administering the purchase order with the seller.

Note: See also FAR 52.248-1(b).

II. The Need for Subcontractor VE Incentives

A. Subcontractor Constraints

Subcontractors frequently are given considerable latitude in the methods they use to carry out the requirements specified in the subcontract or purchase order. Under fixed-price arrangements, they may have a strong incentive to increase profits by improving their methods after the purchase order is awarded. With cost incentive arrangements, they share under the share pattern these savings with the prime.

B. Subcontractor Opportunity

Subcontract value engineering incentives are intended to remove these constraints by giving the subcontractor a share of the prime's savings from subcontract modifications initiative by the subcontractor. Properly designed and administered, these provisions not only remove the threat of reduced profit, but also offer the subcontractor a substantial return for his investment in value engineering proposal development. It is evident from examples presented in Appendix 3 that subcontractor profits from approved value engineering change proposals can be considerable.

C. The Prime Contractor's Responsibility

The prime contractor's engineering organization frequently controls the design and/or specification of components, parts and assemblies being purchased from subcontractors. Under this condition, cost reductions are performed by the contractor's personnel and directed changes are made. However, the timing and efficacy of changes can have adverse effects on the cost effectiveness of such changes.

Initiating a VE incentive program with subcontractors which achieves their "active" participation can provide a prime contractor with additional teams of "investigators". This cooperative effort can help create designs capable of meeting the required level of product or system performance at a lower cost. By means of VE incentive clauses, the prime contractor can provide the subcontractors with motivation to apply all available techniques for value analysis/cost reduction.

In most cases, subcontractors are selected by the prime contractor because they are specialists; i.e., experts in their chosen fields of endeavor. They are constantly involved in, or aware of, advancements in the state-of-the-art of their products or services. These, of course, are the same reasons that the Department of Defense and prime contractors initiate VE incentives in their contracts. Why should it be any different with the subcontractors?

The principle should work as effectively for subcontracts; incentives must be attractive enough to stimulate active subcontractor participation. The buyer must establish with his subcontractors a thorough understanding of the contract requirements and corresponding price and then be willing to share any savings generated as the result of the seller's proposals. An environment of mutual trust and shared objectives is essential.

III. Potential Problem Areas

A. Subcontractor Motivation

While value engineering incentives offer the subcontractor a high return on investment, his decision to pursue these returns will depend on the availability of resources and his evaluation of the attendant risk. Only successful proposals pay off. If value engineering is an unfamiliar activity, the subcontractor may not be able to evaluate the probability of success. He will be reluctant to divert his resources from traditional activities where the benefits are more certain, if less spectacular.

Even when the subcontractor has a well-established value engineering program, his risks may still seem great because he is uncertain about the prime contractor's criteria for evaluating the subcontractor's proposals. For example, the subcontractor may perceive that the prime considers the VE incentives to be "give aways" and has included the provisions only to please his customer. The subcontractor may also be concerned that the prime's technical management might consider VE effort as an unwarranted diversion from subcontract objectives. Other concerns may include some of the following: Will the evaluation be delayed until the opportunity for savings is lost? Will the prime use technicalities to deprive the subcontractor of his fair share of the savings? How will the prime use the subcontractor's product and what quantities will he require in the future?

Effective response to VE incentives will occur only if the prime gives positive assurance to the subcontractor on the above points.

B. Adequate Incentives

The subcontractor's incentive share must be high enough to induce him to develop VE proposals; but the prime's share must also be high enough to induce him to incorporate the proposed changes. A high percentage of the proposed savings may still be an inadequate incentive if the savings is calculated over too limited a base. Real sharing ratios may be affected by whether the subcontractor shares savings in the prime's collateral costs or costs of future acquisitions. Similarly, the contractor's share may be reduced by the necessity to pass on part of the savings to his customer, or by customer disallowances of certain subcontractor incentive payments.

These conditions require that subcontract VE incentive sharing ratios be based on competent analysis of not only the cost reduction proposal itself, but subcontractor capability, potential follow-on, and related prime contract provisions.

C. Contractual Clarity

The purpose of a subcontract VE provision is to produce subcontract action that will lead to prime contractor savings which could not otherwise be realized. It is reasonable to suppose that the subcontractor reward be in proportion to the prime contractor's benefits, but only to the extent that these benefits are the result of the subcontractor's initiative and can be identified with satisfactory confidence. Translating this intent into definitive contractual language can be a difficult task.

Some defense contractors have attempted to avoid these difficulties by copying language used in the Federal Acquisition Regulation (FAR) pertaining to VE incentives. The FAR provisions, however, are designed to cover subcontractor provisions. As a result of poorly

tailored subcontractor VE incentive provisions, disputes have occurred. Most of these could have been avoided by an awareness of the problems involved.

Part IV of this manual deals with a number of important questions that must be considered in developing suitable incentive provisions.

D. Essential Steps to Success

Notwithstanding the real problem areas discussed above, mutually profitable incentive arrangements are possible and, indeed, have occurred between a number of companies. Some of the most important steps necessary are:

1. Extend all adequate clauses with worthwhile incentives under all qualifying circumstances.
2. Provide assistance to the supplier in understanding the VE clause, its applicability, and what you expect from him.
3. Develop streamlined internal procedures for handling VE change proposals when they are submitted.
4. Treat subcontractor-originated ideas with appropriate consideration of his proprietary rights.
5. Encourage advance discussion of subcontractor initiated VECPs with the prime before the subcontractor expends major development effort.
6. Establish the VE incentive program as a regular agenda item for prime/subcontractor review meetings.
7. Keep a two-way communication channel open concerning status of submitted VECPs.
8. Negotiate and settle VECPs promptly.

IV. The Value Engineering Incentive Clause

A. Purpose

A clear statement of the purpose should be communicated to the supplier. Because the clause may be new to the subcontractor, some primes have found it advantageous to send a letter of explanation to first-time suppliers. Such a sample letter may be found in Figure 1. Where the attempt may be to reinitiate VE activity in an existing supplier, the sample letter shown in Figure 2 may be more appropriate; it includes a sample VECP appropriate to either letter.

B. Sample Contract Clauses

Appendices 1 and 2 present two variations of sample clauses essentially the same as those used by two major defense contractors. Although the government is not a party to agreements between a prime and its subcontractors, these clauses are patterned after the general intent of FAR Part 48 (or DAR 1-1700). Each has been tailored from the FAR Part 52 (or DAR 7-104.44) clause language. Since basic contractual arrangements can cover such a wide variety of products and one-of-a-kind situations, the selected clause should be used only after careful evaluation to confirm its applicability to a given procurement. The sample clauses illustrate the features that should be included in the VE incentive provisions of a typical purchase order. They may be used “as is” if appropriate. There is no restriction on the use of any material in this manual.

C. Application of the Clause

The “Application” paragraph of the sample clauses provides criteria for eligibility of proposals under the VE incentive provisions. They are clearly worded to exclude proposals that do not meet the intent of the provision.

D. Content of Value Engineering Change Proposals (VECPs)

The information requested under the “Documentation” paragraph of the sample clauses is essential for proper evaluation of the proposal. The prime contractor will want to examine such documentation thoroughly, and may even have some questions as to the validity of the data presented or the likelihood that he will realize the benefits claimed. However, he should not use this as an excuse to delay or deny the change when, with some modifications, it will offer real benefits. One imprudent rejection can “turn off” a subcontractor and thus deny the prime far greater rewards on subsequent VECPs. This is especially true if it is the supplier’s first proposal.

Figure 1

Sample Letter (to Subcontractor)

ABC COMPANY
(LETTERHEAD)

SUBJECT: Notice of Profit Investment Opportunity

TO: CEO, XYZ Company

The ABC Company is willing to pay you an increased profit if you have any acceptable ideas which will reduce the overall cost of this procurement—or if any other ABC Company procurement.

If you can reduce costs while complying exactly with the provisions of the purchase order, the savings are, of course, all yours. But if a purchase order change is required to permit the cost saving, we will share the saving with you.

Let me give you a few examples:

1. Have we specified an unnecessarily costly packaging method? If you call this to our attention, and we agree, we'll share the saving in this manner: If the unit price could be reduced, say, from \$10 to \$9 due to the relaxed packaging method, we'll only reduce it to \$9.50. There is a clear additional profit for each of us in the amount of \$.50 per unit.
2. Do you have an idea which doesn't necessarily affect the purchase order price (it may even increase it), but will result in ABC Company internal savings? This might be the case where we are furnishing material in a particular size; but if we furnished it in a different size, you might be able to get more pieces out of less total material. In such a case, we will pay you a share of our internal savings.

If you have any questions about this program, or ideas you would like to present or discuss, please consult the buyer named on your purchase order.

Director of Material

Packaging? Specifications? Processing? Materials? Delivery? Tests? Tech Data?

Figure 2

Sample Letter (to Subcontractor)

ABC COMPANY
(LETTERHEAD)

IN REPLY REFER TO:

SUBJECT: Value Engineer/Profit Enhancement Opportunities

TO: CEO, XYZ Company

REFERENCE: Attachment VEI to Our Purchase Order _____
“Value Engineering Incentive”

1. The references attachment to your current purchase order is a requirement of Federal Acquisition Regulation (Far 48.1 & 52.248-1). However, it was not intended to be just “boilerplate” in compliance with FAR. As a partner in the success of our programs, we want you also (one of our major subcontractors) to receive the additional profits that can be derived by your submittal of usable ideas to reduce the cost of your product and therein reduce the cost of our weapon systems.
2. As a result of our internal review to determine why we were not receiving seller VECs, it became apparent that many of our subs did not understand how simple the submittal of an idea under a VEI clause could be. Some subs have flagged ideas to us on the VE questionnaire of the RFP and, in one such case, we were able to short circuit the paper mill by incorporating the idea in the purchase order. Incidentally, that idea generated over \$20,000 of new profit to the sub and will probably generate more on new orders. If it is your cost reduction idea and requires our acceptance and if we can accept it, we are going to share a healthy (50%) chunk of that new savings with you. (If you don't need our approval, you get all of the savings on the current order!) All we ask is that you give us certain minimum information in a simple format. That final step seems to have been the bind for many of you.
3. To encourage you to test the VEC paper mill and beef up your profits, we have attached a ready-made seller's VEC with the bridging words and key phrases pre-written for you. All you do is retype it on your letterhead, insert your data where it is obvious, and mail it in. The quality of your rationale will govern how quickly we can make a proper judgment. We assume your cost data will be sufficient to support the savings identified.
4. Please take a few minutes with your production and engineering people and identify where you can translate into profit dollars those unnecessarily expensive/low-yield non-productive operations or cost-inducing requirements we have inadvertently imposed upon you. We probably will have to disapprove some, but with the submittals as easy as we think it will be using the attached Exhibit VEC, what can you lose? We need you to build our produce. We will be disappointed if you don't have any to share with us.

ABC COMPANY

Manager, Material

Attachment: (Exhibit I to Figure 2): Sample VEC

Exhibit I (to Figure 2): SAMPLE VECP

TO: ABC Company
SUBJECT: Seller's Value Engineering Change Proposal (VECP) for: _____

Ref: (a) Purchase Order _____
Attachment VEI
(b) (TBD)

1. The following VECP is submitted in accordance with reference (a) and proposes the following changes and potential savings for the review and approval of the Buyer. The Seller estimates that a \$ _____ in his cost of performance under this purchase order will accrue if this proposal is accepted prior to ___[date]__.
2. VEI [Appendix I, Para. 3] Documentation
 - (a) Description of Change – The attached [drawing and/or other information] describes the change required to the Purchase Order [or Drawing No. _____] to realize the savings cited below. The change proposed will not impair essential functions or characteristics of the Buyer's product in which the value engineered change is implemented. The following additional rationale is furnished:

[TBD]
 - (b) The attached marked up page(s) of the [choose appropriate]: [Subject Purchase Order] [Procurement Specification] [Drawing No. _____] describe the specific changes recommended by the Seller.
 - (c) [Cost Exhibit] The implementation of the proposed change(s) will result in the following changes to the Seller's cost of performance under this purchase order.
 1. Non-recurring Costs – The following costs (savings) will be incurred by the Seller following acceptance by the Buyer of the change in order to attain the recurring savings below:

[Identify costs with descriptive rationale, if any.]
 2. Recurring Savings – [Provide "WAS" and "PROPOSED" recurring cost detail on material, manufacturing labor and support at Seller's price level for quantity on order.]
 - (d) Other Costs (or Savings) –

[Provide, if any, Seller's estimate of impacts to the Buyer's or Government's cost of performance as a result of the implementation of this change. These may be either (or both) costs and savings areas: identification, not pricing, of these impacts is required and could result in additional incentive payments to the Seller.]
 - (e) Timing – Approval of the proposed change on or before ___[date]___ will result in maximum savings on _____ units of the Purchase Order. Approval thereafter will reduce the savings quantity by _____ units for each month of delay.
 - (f) Other Related Proposals – [See VEI clause, Appendix I, Para. III (F).]
3. Restriction of Data Rights – [See VEI clause, Appendix I, Para. IX]
4. Attachments – [Note: Attach as appropriate any supporting data that would assist the Buyer in its evaluation of the proposal.]

E. Sharing Under the Purchase Order

Provisions under the “Sharing” paragraphs of the two sample clauses are designed to provide the seller with equitable predetermined benefits; under different subcontracting type, the method of calculating price adjustments may vary. The sharing percentages should be selected to provide both the prime and subcontractor with sufficient incentive to realize maximum benefits. Savings in future acquisition of collateral costs may justify a change, even if the result is increased subcontract costs; therefore, the method of making such adjustments is also specified.

1. **Instant Sharing.** The determination of instant contract from concurrent or future contracts should be made to provide the most reasonable incentive to the seller. Due to lead times and lot quantity ordering (typical of the prime-to-subcontractor relationship), it might be preferable to identify the instant contract as all of those firm orders containing the VE'd elements which have been executive as of the date of VECP submission. The buyer may choose to extend this date to the date of implementation of the VECP if practicable.

There is no reason to restrict the instant share percentage to any arbitrary maximum. It may be more advantageous to both the prime and subcontractor if, for example, an 80 percent (or higher) instant share of the net savings is awarded to the sub as a tradeoff against any other claims on concurrent or follow-on contracts. The subcontractor's share should be treated by the prime as an allowable non-recurring expense on a contract with a government agency.

2. **Development and Implementation Expense.** It is generally impractical for a prime to expect a subcontractor to completely rely on the discretion of the prime concerning those expenses occurring in the implementation of a subcontractor's VECP. First, the sub has no way of auditing or validating those expenses; and second, the prime may not have a vested interest in keeping his implementation expenses down when the VECP is subcontractor originated. It is therefore suggested that the prime assume the cost of his implementation of a subcontractor proposed change, as a possible alternative to encourage the sub to submit VECPs. Granted, this recommendation would reduce the prime's share of the sub's VECP; however, it gives the prime a vested interest in analyzing its implementation expenses and encouraging the sub to participate in VECPs.

The prime always maintains its unilateral right to reject a VECP if the prime believes there would be no savings to his contract. In many cases where substantial future orders are anticipated, it would be advantageous to the prime contractor to realize no instant share on the sub's VECP, and even take some loss on that proposal, in order to realize a much larger gain on the follow-on orders.

There are many cases where a subcontractor proposes a significant VECP but the cost of development in making models and qualifying those models is prohibitive. Should the subcontractor undertake this expense, he faces a large risk in that if the VECP is not accepted regardless of its meeting technical qualifications, those development cost are not recoverable. Therefore, a “split risk approach” should be considered. In this case, a subcontractor proposes his VECP and the amount of money required for test model qualifications. If the subcontractor requires such funding on the “front-end” of the VECP and the VECP is accepted by the prime, that front-end development expense is deducted from the subcontractor's share (making the prime's share higher on that VECP regardless

of the percentage conditions stated in the contract). However, should the VECP be rejected for any reason, the front-end expenses are non-recoverable, which makes the investment a consideration of the prime contractor.

3. **Two Types of Changes.** Many VECPs submitted by a subcontractor, while requiring a purchase order change, will not affect the prime's contract (Class 2 change). Other changes may require the prime contractor to submit a change proposal to his contract with the government or other customer (Class 1 change). Sharing percentages with the supplier under this latter case may be lower to allow for the increased administrative expense and lower ultimate share accruing to the prime.

F. Collateral and Future Acquisition Savings

Note that the sample clauses differ in a minor way in the treatment of VECP savings which require Class 1 action between prime and government. The Appendix 1 clause is permissive, the Appendix 2 clause provides sharing only under the condition that the prime will receive an award from his customer if the change is accepted (Class 1 change to the prime). Many changes will not require Class 1 action by the prime. It is essential, in either case, that the prime contractor provide generous collateral and future shares when applicable and with a liberal sharing base (i.e., number of items) included in the instant contract provisions (see paragraph E). If this is still difficult from a contractual standpoint, a supplier may be compensated through additional points of basic fee in either FFP, FPI, for FPAF purchase orders. The underlying principle must be to provide suitable motivation to the supplier for aggressive value engineering actions, in spite of very real procurement restraints that may be unavoidable.

G. Data Rights

Restriction on data rights should normally be in accordance with basic subcontractor provisions. However, these provisions must not make it possible for the subcontractor to submit a VECP and then restrict the use of the data essential to its full implementation. The prime cannot restrict the government's use of subcontractor data in the case of a Class 1 change to the prime contractor unless it has been accepted by the government as "limited rights technical data".

V. Organizational Structure

A. Policy and Procedure

Most of the functions and procedures necessary for the routine administration of subcontractor VE incentives already exist in the typical prime contractor organization. However, until the management concerned become familiar with VE incentives and is motivated to seek the benefits, successful results are unlikely. Creation of such action must be accomplished through extensive communication and experience, rather than reliance on formal policy statements. The less new material there is to learn, the faster the effort will become successful. The most successful efforts to stimulate subcontractor VE proposals make maximum use of existing procedures and concentrate on assuring proper execution of prime contractor responsibilities in a way that assures cost effective performance from subcontractors.

B. Product/Program Management

Prime contractor product/program management must assume the major responsibility for subcontractor motivation. VECPs must become a familiar subject of prime/subcontractor technical liaison. The identity of the evaluators may vary with the nature of the subcontract and the proposal. However, most subcontractor VECPs depend, for disposition, upon the disposition of the prime contractor's technical personnel. These individuals are either on the program manager's technical staff or are funded from the program office. Subcontractor technical personnel, the best source of potential VECPs, are strongly influenced by their counterparts, the prime's technical staff.

Through mutual examination of requirements, suggestion of areas for possible cost reduction, assistance on proposal development, and prompt, objective evaluation, prime contractor technical personnel should be able to convince their subcontractor counterparts that the benefits of value engineering proposal efforts are worth the risk.

C. Contracts Management

A capable and interested contracts function at the prime is an essential element in the initiation and maintenance of an effective subcontractor VE effort. Their first responsibility is to become thoroughly familiar with all aspects of VE incentive contract clauses and to negotiate prime contracts which will be favorable to subcontractor VE effort. Subcontractor changes that affect the prime contract must be negotiated with the prime's customer. The contracts function may also have a responsibility to develop subcontract VE incentive provisions in coordination with the subcontract procurement function.

D. Procurement Management

The FAR requires the inclusion of a VE incentive clause in all subcontractors of \$100,000 or more. It should be procurement's responsibility to identify both those contracts which require the inclusion of the VE clause, and also any lesser subcontracts deemed suitable for incorporation of VE incentives. Each prime contractor will establish his own policy in this respect, limiting application to those areas where potential benefits appear to justify the necessary effort. While procurement is usually responsible for all formal communications with the subcontractor, it is only one of several areas that can influence the quality and quantity of subcontractor submitted VECPs. It can assure uniquely that equitable VE incentive provisions are extended and monitor the resultant prime subcontractor VE activity.

It can also assure that subcontractor VECs are promptly acknowledged and transmitted to the responsible decision makers. It should be responsible for keeping the subcontractor informed of the progress and disposition of his proposals and for arranging any subcontract amendments resulting from approval. Since the prime contractor can be committed by communications between procurement and the subcontractor, it is essential that buyers be familiar with VE incentives and the precautions necessary to avoid misunderstanding.

E. Value Engineering Staff/Specialist

While it should be possible to carry out all aspects of the subcontractor VE incentive with normally established organization functions, some specialized coordination may improve effectiveness, especially if the effort is newly initiated. An existing VE staff/specialist should already contain the necessary knowledge and experience for this task. The subcontract VE coordinator should be well grounded in the technical aspects of the product, knowledgeable in the contractual aspects of value engineering and be delegated the necessary authority to perform his assignment. He should be responsible for seeing that all company personnel are aware of their functions in the subcontractor VE effort and that they have the necessary special information for performing these functions. He should assist technical management in related liaison with the subcontractor, and assist procurement in maintaining communications with the subcontractor. The coordinator should log and track the progress of all incoming subcontractor VECs, anticipating possible problems and taking action to avoid them. It may be desirable for him to make special reports to concerned management.

APPENDIX I

(BUYER)

PURCHASE ORDER ATTACHMENT VEI

Value Engineering Incentive – FP Type

- I. **Introduction.** The Seller has a unique opportunity to identify requirements of this order which may be causing unnecessary costs. The purpose of a value engineering (VE) incentive and this Attachment is to encourage the development and submission of VE change proposals (VECP) by providing the Seller with a meaningful share of the savings resulting from such proposals.
- II. **Application.** This Attachment applies to value engineering proposals initiated and developed by the Seller for changing the drawings, designs, specifications, work statement, or other requirements of this order, provided that such proposals are identified by the Seller at the time of their submission as being submitted pursuant to this Attachment. VECPs contemplated are those that:
 - A. Would require a change to this order; and
 - B. Without impairing any of the essential functions and characteristics of the items or services, would result in savings to the Buyer or its customers by providing:
 1. A decrease in the cost of performance of this order, or
 2. A new reduction in the overall cost of acquisition by effecting a lower cost of customer-furnished property, operations, maintenance, or other areas which exceeds any increased cost of the items or services.
- III. **Documentation.** As a minimum, the following information shall be submitted by the Seller with each proposal:
 - A. A description of the difference between the existing order requirement and the proposed change; the comparative advantages or disadvantages of each, including justification when the function or characteristic of an item is being altered; the effect of the change on the performance of the end item; and any pertinent objective test data.
 - B. An itemization of the requirements of that order that must be changed if the proposal is adopted and a recommendation as to how to make each change (e.g., a suggested revision).
 - C. A detailed estimate of the reduction reflecting both recurring and non-recurring costs in order performance that will result from adoption of the proposal taking into account the costs of development and implementation by the Seller (including any amounts attributable to subcontracts of Seller in accordance with Paragraph VIII below) and the basis for the estimate.
 - D. A prediction of any effects the proposed change would have on costs to the Buyer or its customer, such as customer-furnished property costs, costs of related items, and cost of maintenance and operations.
 - E. A statement of the time by which a change order adopting the proposal must be issued so as to obtain the maximum benefit together with estimates of benefits if VECP approval is delayed beyond the

maximum benefit date of 60, 120 or 180 days, noting any effect on the order completion time or delivery schedule.

- F. The dates of any previous submissions of the proposal, identification of the prime contracts or purchase orders involved and the previous actions by the customer, if known.

IV. **Administration of Proposals.** The Buyer will process proposals expeditiously; however, neither the Buyer nor its customer shall be liable for any delay. The decision of the Buyer as to the acceptance of any such proposal under this order shall be final and conclusive and shall not be subject to the Disputes provision of this order. The Buyer may accept, in whole or in part, any value engineering proposal submitted either by using a change to this order or, if performance has been completed, by giving written notice of acceptance and appropriately modifying the order. Unless and until a value engineering proposal is accepted, the Seller shall remain obligated to perform in accordance with the existing terms.

V. **Sharing.** If a value engineering proposal is accepted and applied to this order, an equitable adjustment in the affected provisions of this order shall be made in accordance with Paragraph A or B below:

- A. Applicable if the order is firm fixed-price:

If a value engineering proposal submitted pursuant to this Attachment is accepted and applied to this order, an equitable adjustment in the price and in any other affected provisions of this order shall be made in accordance with this Attachment and the “Changes” or other applicable clause. The equitable adjustment shall be established by determining the net effect of the proposal on the Seller’s Cost of performance, taking into account the Seller’s cost of developing the proposal and implementing the change (including any amount attributable to subcontracts in accordance with Paragraph VIII below).

Whenever the cost of performance of this order is decreased as a result of the change, the purchase order price shall be reduced by fifty percent (50%) of the net estimated decrease in the Seller’s cost of performance to reflect the equal share of the savings.

- B. Applicable if this order is fixed-price-incentive:

If a value engineering proposal submitted pursuant to this Attachment is accepted and applied to this order, an equitable adjustment in the total target price of the items subject to incentive price revision and in any other affected provisions of this order shall be made in accordance with this Attachment and the “Changes” or other applicable clause. The equitable adjustment in such total target price shall be established by performance, taking in to account the Seller’s cost of developing the proposal, insofar as such is properly a direct charge not otherwise reimbursed under this order, and the Seller’s cost of implementing the change (including any amount attributable to subcontracts in accordance with Paragraph VIII below). When the cost of performance of this order is decreased as a result of the change, the total target cost of the affective items shall be reduced by the full amount of the net estimated decrease in the Seller’s cost of performance; the total target profit relating to such items shall be increased by fifty percent (50%) of the net estimated decrease; and the estimated final price shall be adjusted to the sum of such adjusted cost and profit.

VI. **Future Acquisition and Collateral Savings.** If a value engineering proposal submitted by the Seller is accepted by the Buyer and is applicable to future purchases, the Seller shall receive either:

- A. Fifth percent (50%) of the royalty the Buyer shall receive from its customer, or
- B. If no royalty accrues to the Buyer, fifty percent (50%) of the unit cost reduction as a Seller’s royalty for purchases of the same article during the three years following the basic quantity purchases under this order.

Should the Seller's VECP result in the Buyer receiving a share in collateral savings, the Seller shall received fifty percent (50%) of Buyer's share.

VII. **Proposals Identical to those Submitted Under Other Contracts.** A value engineering proposal identical to one submitted by Seller or another contractor under any other contract or subcontract may also be submitted under this order. If the Seller submits under this Attachment a proposal which is identical to one previously submitted by him under a different contract or subcontract or by or to another contractor for substantially the same items and both proposals are accepted, only Paragraph V of this Attachment shall be applicable to such proposal.

VIII. **Subcontract.** The Seller shall include appropriate value engineering arrangements in any non-exempt, per FAR 52.248, subcontract of \$100,000 or greater, and may include such arrangements in subcontracts of lesser value.

IX. **Restriction of Data Rights.** The Seller may restrict Buyer's and its customer's right to use any sheet of a value engineering proposal for of the supporting data, submitted pursuant to this Attachment, in accordance with the terms of the following legend, if it is marked on such sheet:

"This data furnished pursuant to the Value Engineering Incentive Attachment of (Buyer) Purchase Order Number _____ shall not be disclosed outside (Buyer), the Government, or (Buyer's) customer (if other than the Government), or be duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering proposal submitted under said order. This restriction does not limit the right of (Buyer), the Government, or (Buyer's) customer (if other than the Government), to use information contained in this data if it is or has been obtained, or is otherwise available, from the Seller or from another source, without limitation.

"In the event of acceptance of a value engineering proposal, the Seller hereby grants to the Buyer, the Government, and the Buyer's customer (if other than the Government), unlimited rights, as defined in FAR Part 27, in the proposal and supporting data, except that , with respect to data which qualifies as and is submitted as limited rights technical data in accordance with the clause of FAR Part 27, the Buyer, the Government, and the Buyer's customer (if other than the Government), shall have the right specified in the contract modification referred to in Paragraph IV hereof and the data shall be appropriately marked."

APPENDIX II

SUBCONTRACT VALUE ENGINEERING INCENTIVE CLAUSE DEPARTMENT OF DEFENSE CONTRACTS ONLY FIRM FIXED PRICE

A. APPLICATION

1. This clause applies to those proposals submitted by the Seller for change to the requirements of this P.O./subcontract which:
 - a. Would result in a net cost savings to “Buyer” and/or the cognizant Military Department without impairment to the essential functions or characteristics of “Buyer” and/or the Military Department Systems and operations, and
 - b. Are submitted by the Seller in an effective manner for practical application to this P.O./subcontract, prior to any positive action by “Buyer” and/or the Military Department to implement the proposed change.
2. This clause does not apply, however, to any such proposal if it is based:
 - a. Solely on a change to the contract type, or
 - b. Solely on a change to the deliverable end item quantities, or
 - c. On a change in R&D end item or test quantities due solely to results of previous testing under this P.O./subcontract.
3. A VECP submitted pursuant to this clause shall not be submitted pursuant to the VE incentive clause of any concurrent procurement, as define in C.1.d below.

B. DOCUMENTATION

As a minimum, the following information shall be submitted by the Seller with each proposal:

1. A statement that the proposal is submitted pursuant to this clause.
2. A description of the difference between the existing contract requirement and the proposed change, and the comparative advantages and disadvantages of each; justification when a function or characteristic of an item is being altered; and the effect of the change on the performance of the end item.
3. An analysis and itemization of the requirements of the P.O./subcontract which must be changed if the proposal is accepted and a recommendation as to how to make each such change (e.g., a suggested specification revision).
4. A separate detailed cost estimate for both the existing P.O./subcontract requirements and the proposed change to provide an estimate of the reduction in costs, if any, that will result from acceptance of the proposal, taking into account the costs of development and implementation by the Seller.

5. A prediction of any effects the proposed change would have on collateral costs to the Military Department and/or “Buyer” such as furnished-property costs, costs of related items, and costs of maintenance and operation.
6. A statement of the time by which a change order accepting the proposal must be issued so as to obtain the maximum cost reduction, noting any effect on the P.O./subcontract completion time or delivery schedule.
7. Identification of any previous submission of the proposal, including the dates submitted, the numbers of the Government contracts involved, and the previous actions by the Government and/or “Buyer”, if known.

C. SHARING

If a proposal submitted by the Seller pursuant to this clause is accepted, the Seller shall share in the net savings realized by “Buyer” and/or the Government in accordance with the following provisions:

1. Definitions
 - a. Collateral costs are those costs to “Buyer” and/or the cognizant Military Department purchasing office for operations, maintenance and logistic support, other than acquisition costs for essentially the same items required under this P.O./subcontract.
 - b. “Buyer”/Government costs are those which directly result from development and implementation of the proposal, such as test and evaluation costs and any increase in collateral costs.
 - c. The instant P.O./subcontract consists of those requirements of this P.O./subcontract which are firmly defined before acceptance of this proposal.
 - d. Concurrent procurement consists of contracts/P.O.s/subcontracts for essentially the same items as the instant P.O./subcontract, established by “Buyer” and/or the cognizant Military Department purchasing office before acceptance of the proposal and to which the proposal is also applied.
 - e. Future procurement consists of P.O./subcontracts for essentially the same items as the instant P.O./subcontract, issued by “Buyer” and/or the cognizant Military Department purchasing office to the Seller after acceptance of the proposal and to which the proposal is also applied. Future procurement includes items added to this P.O./subcontract by modifications or by extension through exercise of options provided.
2. Determination of Savings.
 - a. Instant savings is the reduction in cost of performance of the instant P.O./subcontract resulting from the proposed change, taking into account the Seller’s cost of developing the proposal and implementing the change.
 - b. Net instant savings is the Seller’s instant savings, less any “Buyer”/Government costs not exceeding the Seller’s instant savings.
 - c. Net concurrent savings is the reduction in cost to the “Buyer” and/or the Military Department purchasing office of concurrent procurement, resulting directly from application of the proposal, less any resulting increase in instant P.O./subcontract costs and/or less any amount by which “Buyer”/Government costs exceed instant savings.

- d. Unit savings is the Seller's instant savings, plus the Seller's instant savings, plus the Seller's development and implementation costs, divided by the number of items affected by the proposed change under the instant P.O./subcontract.
- e. Net future savings is the unit savings multiplied by the number of units actually delivered under future procurement, less any "Buyer"/Government costs, less any increased costs of the instant P.O./subcontract and/or concurrent procurement not offset by instant/concurrent savings.
- f. Net collateral savings is the reduction in ascertainable collateral costs resulting from the proposed change, less any "Buyer"/Government costs, less any increased costs of the instant P.O./subcontract, concurrent procurement and/or future procurement not offset by instant/concurrent/future savings. The determination of the amount of collateral cost reduction, if any, will be made solely by "Buyer" and shall not be subject to the "Disputes" clause of this P.O./subcontract.

3. Seller's Share

- a. Except as provided in C.3.b below, the Seller's share shall be:
 - (1) _____ percent (____%)* of the net instant savings;
 - (2) _____ percent (____%)* of the net "Buyer" concurrent savings;
 - (3) _____ percent (____%)* of the net "Buyer" future savings realized on all affected end items scheduled for delivery not later than three (3) years after acceptance of the first item incorporating the proposed change, and;
 - (4) _____ percent (____%)* of any net "Buyer" collateral savings which are determined to be realized during an average year of use of the item in which the change is incorporated.
- b. If implementation of the proposal requires a change to the "Buyer" contract under which this P.O./subcontract is issued, and such change is accomplished pursuant to the Value Engineering Incentive provisions of that contract, the Seller's share shall be:
 - (1) _____ percent (____%)* of the net instant savings;
 - (2) _____ percent (____%)* of the net "Buyer" instant savings and/or the cognizant Military Department purchasing office concurrent savings;
 - (3) _____ percent (____%)* of the net "Buyer" and/or cognizant Military Department purchasing office future savings realized on all affected end items scheduled for delivery not later than three (3) years after acceptance of the first item incorporating the proposed change, and;
 - (4) _____ percent (____%)* of the net "Buyer"/Government collateral savings determined to be realized during the average year of use of the time in which the change is incorporated.
- c. "Buyer's" obligation to make payments to the Seller under 3.b is expressly conditioned upon "Buyer" receiving such payments from the Government.

D. PAYMENT AND PRICE ADJUSTMENT

- 1. If an accepted proposal results in an increase to the cost of performance of this P.O./subcontract, price should be equitably adjusted in accordance with the "Changes" clause.

2. If other than 1., then subtract from the price of this P.O./subcontract an amount equal to the difference between the instant savings and the Seller's share of net instant savings.
3. Add to the price of this P.O./subcontract the Seller's share of net concurrent savings and net collateral savings.
4. Add to each eligible future P.O./subcontract, at the time it is awarded, a separate line item with a price equal to the Seller's share of the net future savings realized on the number of units scheduled to be delivered under that future P.O./subcontract. This separate line item will be independent of any incentive sharing arrangement, if applicable, to that future P.O./subcontract. All payments are subject to the condition that to the extent "Buyer" and/or the Government does not receive delivery of and accept all items on which the share is paid, the Seller shall reimburse "Buyer" the proportionate share of the payments.

E. DATA RIGHTS

Seller may restrict "Buyer's" and the Government's right to use any sheet of a VECP or the supporting data submitted pursuant to this clause in accordance with the terms of the following legend if it is marked on such sheet:

"The data furnished pursuant to the Value Engineering subcontract clause of P.O./subcontract shall not be disclosed outside of "Buyer" or the Government, or duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a VECP submitted under this clause. This restriction does not limit "Buyer's" or the Government's right to use information contained in this data if it is or has been obtained, or is otherwise available, from the Seller or from another source, without limitations.

"In the event of acceptance of a VECP, the Seller hereby grants to the Government unlimited rights as defined in the clause of DAR 7-104.9(a) in the VECP and supporting data, except that, with respect to data which qualifies as and is submitted as limited rights technical data in accordance with the clause of DAR 7-104.9(a), the Government shall have the rights specified in the contract modification referenced to in Paragraph C7 hereof and the data shall be appropriately marked."

F. SUBMISSION

"Buyer" shall process proposals expeditiously; however, "Buyer" shall not be liable for any delay in acting upon any proposal submitted pursuant to this clause. Seller has the right to withdraw, in whole or in part, any proposal not accepted by "Buyer" within the period specified in the proposal.

G. ACCEPTANCE

Until a change order applies a proposal to this P.O./subcontract, Seller shall remain obligated to perform in accordance with the terms of the existing P.O./subcontract. The decision of "Buyer" as to the acceptance of a proposal under this P.O./subcontract shall be final.

VALUE ENGINEERING FIXED PRICE INCENTIVE

1. Paragraph C.4. of above clause is hereby deleted in its entirety and replaced by the following:

C.4. Payment and Price Adjustment

- a. If an accepted proposal results in an increase to the cost of performance of this P.O./subcontract, the P.O./subcontract price will be equitably adjusted in accordance with the “Changes” clause.
- b. Reduce the target cost by an amount equal to the instant savings. Add the Seller’s share of the net instant savings to the total target profit.
- c. Subtract from the ceiling price of this P.O./subcontract an amount equal to the difference between the instant savings and the Seller’s share of the net instant savings.
- d. Add to this P.O./subcontract, the Seller’s share of the net concurrent savings and the net collateral savings as a separate line item independent of the incentive sharing arrangement and without adjustment to any of the contract incentive parameters.
- e. Add to each eligible future P.O./subcontract a separate line item with a price equal to the Seller’s share of the net future savings realized on the number of units scheduled to be delivered under that future P.O./subcontract. All payments are subject to the condition that to the extent Buyer and/or the Government does not receive delivery of and accept all items on which the share is paid, the Seller shall reimburse Buyer the proportionate share of the payments.
- f. Buyer’s payments to the Seller under C.3.b are expressly conditioned upon Buyer receiving authorization for such payments from the Government.

APPENDIX III

EXAMPLES OF PROFIT MAKING CHANGES

A. THE MECHANICS OF CONTRACT CHANGE

Three hypothetical examples are provided to illustrate the more common situations that occur between prime and supplier. In brief, the three examples are summarized as follows:

- | | |
|-----------|---|
| Example 1 | The change affects the suppliers current purchase order only and does not require the prime to obtain his customer's approval. |
| Example 2 | The change affects the supplier's current purchase order only and requires a change to the prime's contract with his customer. |
| Example 3 | The change affects the supplier's current purchase order, requires a change to the prime's contract, and qualifies for future acquisition and collateral savings sharing. |

In Example I, note that the prime had no implementation costs. Had there been a nominal cost to the prime for purchase order change, it is recommended that this come out of his share rather than out of the net savings before the split. In Example II, the prime's cost for change processing was deducted after the split. This is the recommended arrangement, even though the prime still has to share his portion of the savings with his customer.

SAVINGS/SHARE CALCULATION OF SUPPLIER-INITIATED VALUE CHANGES

Example 1

- Assumptions:
- 1) Prime contract contains VE incentive clause (DAR DEC 1980), FPIF (70:30)
 - 2) P.O. contains VE incentive clause (Appendix I) (FFP)
 - 3) Prime contract and purchase order sharing arrangements: 50/50 instant contract.
 - 4) Supplier initiates and submits acceptable value change which is Class 2 between prime and government.

Supplier's estimated gross savings	\$10,000
Less his estimated cost for making the change	\$1,000
Supplier's net estimated decrease in cost of performance under P.O. (instant contract)	\$9,000
Contractor's cost for implementing the change	N/A
Estimated net cost savings to be shared (incentive base)	\$9,000
Supplier's share based on 50/50 instant contract sharing announcement	\$4,500
Contractor's share, under shareline 30% of 4,500	\$1,350
Government's share, under shareline 70% of 4,500	\$3,150

Subsequent Actions

- 1) Contractor notifies supplier, in writing, that the value change is approved; instructs supplier to implement and to submit first cost proposal.
- 2) Contractor/supplier negotiate cost/savings proposal as described.
- 3) Contract issues P.O. change awarding supplier his share of saving by reducing P.O. by \$4,500.

SAVINGS/SHARE CALCULATION OF SUPPLIER-INITIATED VALUE CHANGES

Example 2

- Assumptions:
- 1) Prime contract contains VE incentive clause (DAR DEC 1980), FFP
 - 2) P.O. contains VE incentive clause (Appendix I)
 - 3) Prime contract and purchase order sharing arrangements: 50/50 instant contract.
 - 4) Supplier initiates and submits a value change which is Class 1 to prime contractor and is approved by both contractor and government.
 - 5) No concurrent, future or collateral savings exist.

Supplier's estimated gross savings	\$10,000
Less his estimated cost for making the change	\$1,000
Supplier's net estimated decrease in cost of performance under P.O. (instant contract)	\$9,000
Supplier A's share based on 50% incentive	\$4,500
Net savings after supplier share	\$4,500
Prime contractor's cost for implementing the change	\$1,000
Amount to be shared between contractor and government	\$3,500
Contractor's share based on 50/50 instant incentive in prime contract	\$1,750
Government's share based on 50/50 instant incentive in prime contract	\$1,750

SAVINGS/SHARE CALCULATION OF SUPPLIER-INITIATED VALUE CHANGES

Example 3

- Assumptions:
- 1) Prime contract contains VE incentive clause (DAR DEC 1980), FFP
 - 2) P.O. contains VE incentive clause (Appendix I)
 - 3) Prime contract and purchase order sharing arrangements:
 - a) Instant contract 50/50 (as in Example 2)
 - b) Collateral sharing – 20%/1 year (prime’s share)
 - c) Future acquisition (royalty) sharing – 50% three years scheduled deliveries following first delivery (prime’s share)
 - 4) P.O. sharing arrangements:
 - a) Instant contract 50/50 (Examples 1 and 2)
 - b) Collateral sharing – 50% of contractor’s share
 - c) Future acquisition (royalty) sharing – 50% of contractor’s share
 - 5) Supplier initiates and submits the value change of example II which is Class 1 to contractor and is approved by both contractor and government, except future and collateral savings exist.

Future Acquisition (Royalty) – Savings/Shares

Assume	\$100/unit net savings before shares	
Government’s share	(50%) \$50/unit	
Contractors share	(50% before split with supplier)	\$50/unit
	(After 50:50 split with supplier)	\$25/unit
Assume	500 units containing VECP delivered in share period	
Government save \$25,000; contractor and supplier - \$12,500 each.		

Collateral Savings/Share

Assume	\$50,000 savings identified to government for an average year in the service life of product
Contractor’s share	(20% of one year) - \$10,000 (before supplier split)
Supplier’s share	(50% of contractor’s share) - \$5,000
Net prime contractor’s share	\$5,000

B. CASE HISTORIES

The three cases described below are actual examples of negotiated changes. They illustrate the kind of procurement situations that can occur where a knowledgeable prime has been able to provide an adequate base for sharing by the supplier. Cases 1 and 3 were subject to DAR; Case 2 was not.

Case 1

An avionics subcontract called for delivery of a number of computer assemblies, with potential follow-on requirements of 133 assemblies in three years. The subcontractor's VE incentive was fixed at 50% of any reduction in costs of subcontract performance and 20% of the savings to any assemblies procured during a subsequent three-year period.

The subcontractor proposed to reduce the cost of a computer module by revising the design to incorporate new integrated circuits. While requiring a change to the subcontract specifications, this change was within the scope of the prime contract. Reduction in cost of subcontract performance was \$22,080. Unit cost saving for follow-on procurement was estimated to be \$660.

The savings were shared in the following manner:

Subcontract Savings		
Prime Contractor ²		\$11,040
Subcontractor		<u>+ 11,040</u>
Total		\$22,080
Future Savings		
Program (133 X 60)		\$87,700
Prime Contractor ³	(80%)	\$70,224
Subcontractor	(20%)	<u>+ \$17,556</u>
Total		\$87,780

Additional benefit was an increase in reliability of the module because of a reduced number of parts in the new design.

² Real savings of prime can be figured at prime's selling price.

³ The reduced cost of prime's performance, after supplier's VE incentive share, is passed on to government on future orders.

Case 2 (Commercial Sale, Not With Government)

A commercial aircraft subcontract called for fabrication of 22 structural subassemblies, using forged titanium blanks furnished by the manufacturer. Estimated follow-on requirements were for 150 additional assemblies. The subcontractor's VE incentive was limited to 50% of any reduction in costs of subcontract performance.

The subcontractor proposed that, instead of the forged blanks, the manufacturer furnish titanium extrusion with dimensions closer to the finished size. Reduction in cost of subcontract performance was \$4,112, with a unit cost saving of \$187 for future procurement. The equivalent manufacturer's material savings were \$12,254, with a unit cost saving of \$2,058 for future procurement.

Under the VE incentive provisions, the subcontractor received only \$2,056, leaving a 172 unit savings of \$351,060 for the manufacturer. In return for the subcontractor's services, however, the manufacturer placed an order for the additional 150 assemblies at the original price.

The resultant savings sharing was as follows:

Subcontract savings

Manufacturer	\$2,056
Subcontractor	<u>+ \$2,056</u>
Total	\$4,112

Future savings

Manufacturer	\$0
Subcontractor	<u>+ \$28,050</u>
Total	\$28,050

Material savings

Manufacturer	\$320,954
Subcontractor	<u>+ \$0</u>
Total	\$320,954

Case 3

An aerospace weapon system manufacturer has firm orders for 2,800 XY missiles under an FFP contract with firm priced options for follow-on orders of two additional 500-missile lots. A supplier with an Appendix 1 VEI type VE incentive clause in his purchase order provides an electronic module used in five places of the XY missiles. He submits an acceptable VECP to modify the packaging of the module reducing its unit acquisition cost to the prime from \$10.00 to \$6.00 (\$20/missile). The change is Class 1 between supplier and prime, but Class 2 between prime and government. The change did not result in any non-recurring costs to the supplier.

The savings were shared in the following manner:

Initial subcontract order:

Total savings: 14,000 modules/2,800 missiles	\$56,000
Supplier's share at 50%	\$28,000
Prime's share	\$28,000

Follow-on orders within priced options:

Total savings: 2,500 modules/500 missiles	\$10,000
Supplier's share at 50%	\$5,000
Prime's share	\$5,000

Follow-on orders beyond priced options/during supplier's share period:

Total savings per 500 missile buys	\$10,000
Supplier's shares @ 2.00/module, \$10/missile ⁴	\$5,000
Prime's share ⁴	\$0
Government's share: reduction in negotiated cost	\$5,000

⁴ The supplier's VE incentive share is an allowable cost in the prime's contract. The prime's cost of performance has been decreased by the net \$5,000 and this is properly reflected in the prime's new price for the third and subsequent buys (until the supplier's three years of sharing have expired). Thereafter, the Government will benefit by the full savings of the VE'd module.