

## THE FAR VE CLAUSE - ENGRAVED IN STONE?

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### ABSTRACT

This paper chronicles significant changes in the wording - and to the degree to which it can be inferred, the intent - of the Armed Services Procurement Regulation (ASPR) and the present FAR. The clause has evolved in response to changed acquisition environments and toward more clarity.

### INTRODUCTION

When the title of this article was chosen, I was under the impression that there was only one kind of stone - hard. On CNN's 19 September 1993 Evans and Novak show, however, Mack McLarty, the White House Chief of Staff stated, "That's not written in absolute stone." So, apparently there are varying degrees of stone in which things are written. If the VE clause used in the federal Government is considered to be engraved in stone, it must be one of the softer variety. If any one word typifies the VE clause and its evolution, that word is "change." The VE clause used in the Government has been "under continuous improvement" since it was first implemented - and the changes are still coming. As I frequently tell my students, change isn't something to resist - the very essence of VE/Value Analysis (VA) is change.

### BRIEF HISTORY OF THE USE OF VE IN THE GOVERNMENT

As we all know, the use of an informal VA methodology began during the latter days of World War II. Many critical materials were in very short supply and the use of substitute materials became obligatory. Some of the substitutions were not as good as the originals but others proved to be as good or better than the original and -surprisingly, obtained at a lower cost than the original item or items. Lawrence D. (Larry) Miles conducted a study of these expedient actions at General Electric beginning in 1947 and discovered a veritable Pandora's box of answers, ideas, and procedures far beyond his original assignment. The technique that evolved from his studies was called "VA."

The first DoD activity to initiate a formal value program was the Navy BuShips agency in their shipyards. In 1954, Larry Miles and Roy Fountain of GE were asked to set up the shipyard program to help reduce costs as the cost of ship construction had almost doubled in the nine years since the end of WWII. To avoid some internal semantic problems, BUSHIPS asked that the program be called "VE" - the term still in use in the Government today.

The Army followed in 1956 at Watervliet Arsenal (a part of the Army Ordnance Corps), again with GE assistance. The success of this cost reduction program at Watervliet led to its spread to other arsenals and, by 1959, the Army Management Engineering Training Agency (AMETA) had begun to offer VE training in its curriculum.

Both the Navy and the Army's seminal programs were applied in house. The Air Force, lacking the organic capability of the other two services (with their shipyards and arsenals), was the first to apply VE contractually in 1961. The use of VE through contract clause coverage became the genesis for coverage first in the ASPR, then the Defense Acquisition Regulation (DAR) and currently, the Federal Acquisition Regulation, (FAR). The first mention of VE in the acquisition regulations,

however, amounted to about one and one-half pages in a 1959 revision to the ASPR. This was not sufficiently complete to permit its use in a contract - it only referred to the concept and suggested its use to contracting officers.

### EVOLUTION OF THE VE CLAUSE

In chronicling the evolution of the VE clause used in Government contracts, I will be eternally grateful to my mentor (and a person many of you looked up to and remember fondly) Professor Howard M. (Howie) Pryor. In the detritus left behind after his untimely passing was an almost complete set of regulations (ASPR and DAR), Defense Procurement Circulars (DPCs) and Defense Acquisition Circulars (DACs). All that was left was to read them beginning from the earliest in the file and note the evolution from change to change. For one thoroughly familiar with the FAR, it was relatively simple to note where the earlier clauses differed and then see if that difference was changed from the previously-issued clause. Those of you familiar with the clauses prior to the FAR will certainly appreciate just how difficult it was at times to "plow through" the sometimes disjointed manner in which the earlier clauses seemed to have been written. The detailed reading of the clause from the beginning, on the other hand, certainly demonstrated the guiding hand and the improvements that were made in almost every iteration. A complete list of every change to the VE clause used in Government contracts is contained at the end of this paper - only those that made significant changes to the clause will be discussed below.

Initially, the VE clause (Incentive sharing) was used only with command approval (Revision 45 to ASPR, April 1959), evolved to use if agreeable to both parties (March 1962, Revision 8 to ASPR) and finally, on 31 December 1962 (Revision 13, ASPR) use of the clause became mandatory in certain prescribed conditions. These initial versions of the clause provided for Instant sharing only and sharing rates were negotiated. The December 1962 version permitted "tailoring" of the Incentive (voluntary) share rates but prescribed 50% of cost savings as the norm (previous clause had 50% of price savings as the norm) and further stated that the contractors share could not exceed 75%. Two other unusual characteristics of this clause was that the use of a Program Requirement was generally limited to cost reimbursement contracts as its use in fixed-price contracts increases initial costs to the Government. To use a Program Requirement on a fixed-price contract required approval of the HPA or Head of the Procuring Activity (now called the Head of the Contracting Activity -HCA). The other factor different from the current clause is that sharing with the contractor under a Program Requirement was not to have begun until cost reductions exceed the Government's funding by five times. After the savings exceed those 5X limits, the contractor could receive a 50% share.

ASPR Revision 3 (15 November 1963) contained a statement that the "likelihood [for cost reduction] will not be present in contracts for construction, research, or exploratory development." As we will see, construction became a possibility for VE by July 1964. Sharing under the Incentive sharing arrangement remained as before but the "five times" rule was deleted for Program Requirement VECs and provided a 25% maximum share for Firm Fixed Price and incentive-type contracts and a 10% normal/10% maximum share for Cost Plus

Fixed Fee contracts. Revision 3 also added a Data paragraph.

On 1 July 1964, ASPR Revision 6 extended VE sharing to construction contracts by changing when VE cost reductions normally would not be present - "architect-engineering" was substituted for "construction." However, in paragraph 1.1703.3 "Limitations," it was stated that a VE *program requirement* shall not be included in contracts for construction (including architect-engineering). While not proscribing the use of a Program Requirement in construction, the current FAR clause has no provisions to accommodate its use in construction contracts.

A major change was wrought by DPC 11, issued on 9 October 1964. Sharing was expanded to cover the results of using the VE idea in follow-on contract(s) for the same end item (future contracts) and for sharing in logistics support costs resulting from operation, support and maintaining the changed item in the field (collateral savings). The Circular also authorized prime contractors to include subcontractor shares as a part of the cost of implementing VE changes. The sharing period could not be less than one year but could be as long as "three years from the scheduled completion of deliveries under the instant contract or the acceptance of the cost reduction proposal, whichever is later." Note, however, that the period is negotiable from one to three years and guidance was provided the contracting officer as to which end of the two-year continuum would be most appropriate. Sharing rates began to resemble the matrix used in the current clause but still contained "normals" and "maximums." A VECP submitted under a FFP contract was to receive a 50% normal/75% maximum share if the Incentive sharing arrangement were used and a 25% normal/25% maximum under a Program Requirement. A FPI or CPIF was to receive a 50% maximum under Incentive sharing and 25% maximum with a Program Requirement. For a CPFF contract, the Incentive sharing clause was not to be included and the contractor could receive a 10% normal and maximum share under Program Requirement. The Future share was never to exceed the Instant contract share and the percentages were given as: FFP, FPI and CPIF contracts 20%-40% under Incentive sharing; 10%-20% with Program Requirement. Again, the Future sharing on CPFF contracts was not applicable for Incentive sharing and was given as 5% for Program Requirement. The longer the sharing period negotiated, the lower the future share. Collateral sharing was 10% of one year's savings. The Contracting Officer could limit sharing to the Instant contract only if s/he felt that the contractor would be sufficiently motivated by such limitation. To provide guidance as to the future share, paragraph 1.1702.2(b) contained a space to be completed in which the name of the service could be filled in - future shares would be based on future contracts awarded by that service. As most readers are aware, the share base is now defined as only the contracting office that awarded the instant contract (or a successor office to which the contracting action is transferred).

No major changes were promulgated in DPC 19 on 30 November 1964 but the change did contain a statement from then Secretary of Defense Robert McNamara in which he expressed his support of VE and suggested that "application of VE warrants strong incentives." A further statement asked all Departments (services) to expedite the application of VE clauses in all appropriate new contracts and to review all existing contracts to consider whether VE should be added. Another desirable item was added by DPC 26 on 8 April 1965 when a "Notice of VE Royalty Payments" was required to be added to all contract documents. This notice served to flag the file for possible royalty payments being due the Instant contract holder. Perhaps a similar requirement in the current clause would reduce the possibility of those payments "slipping through a crack."

Yet another desirable addition was made in DPC 39, issued on 16 March 1966. That clause required that a blank contained in paragraph 1.1707-2(b) be completed to identify the types of items considered by the Government to be substantially the same end items as those purchased under the Instant contract. After hearing some of the horror stories from field activities over the varying interpretations of what is the "unit," an argument can certainly be made for the reintroduction of such a definitization of what unit the Contracting Officer and the contractor intend. As for the blank added in DPC 11, that was scaled down in DPC 39 to include the DOD agency or procuring activity. Sharing could be less than the service level. This DPC contained the first allusion to concurrent savings by adding a statement regarding the unit cost reduction on those contracts and how such a

reduction would be calculated.

On 1 June 1967, Revision 23 of the ASPR provided the next major change to the regulation. Sharing of savings on Government Furnished Material (GFM) was categorized as "Acquisition savings," while other Government Furnished Property (GFP) savings continued at the more austere rate of collateral savings sharing - 10% of one year's identified savings. This Revision added that the VE clause was not appropriate in Time and Materials contracts. The sharing in multi-year contracts was much more explicit than the current FAR clause as to the intent of VE sharing. A procedure was provided for calculating the contractor's share but there was no deduction made for Government costs.

DPC 65, dated 20 December 1968, changed Future sharing from a "normally shall" to "shall." Discretionary sharing on Future contracts (if sharing on the Instant contract alone would be considered sufficient motivation to the contractor) was continued in DPC 65 but the affirmative determination for such a decision was raised from the Contracting Officer to the "officer in charge of the purchasing office" (typically an individual at least one organizational level above the Contracting Officer). With the raising of this affirmative decision level, the determination as to whether collateral savings would not be shared with the Instant contractor was lowered in DPC 65 from the Head of the Procuring Activity (HPA) to the officer in charge of the purchasing office. The savings share on Instant contract savings under the Incentive sharing was changed from "normally 50% and in no event greater than 75%" to a more discretionary "50% to 75%." Future shares were changed from "contractors share [on future acquisition savings] should normally be significantly less than his percentage share on the instant contract and shall never exceed it" to "should be less than his percentage share on the instant contract." In previous clauses, it was stated that the percentage share in future acquisition savings should be from 20% to 40% and, other things being equal, the longer the sharing period, the lower the future share. More guidance was provided in DPC 65 and future shares were prescribed as being at least 40% for a one-year share period, 30% for a two-year period and 20% for a three-year share period. If a lesser share was deemed to be more appropriate, an affirmative determination had to be made by the officer in charge of the purchasing office.

DPC 88, 20 May 1971, deleted the Time and Materials restriction and changed the clause date from "(JUN 1967)" to "(1971 MAY)." The primary purpose of this DPC was to explicitly provide coverage of maintenance and overhaul contracts under acquisition savings rather than restrict the sharing under such contracts to collateral sharing.

The next major revision to the clause was made by DPC 121, issued effective 10 May 1974. Beginning with this revision, the clause began to take on a resemblance to the current FAR clause. Concurrent contracts were explicitly recognized for the first time. The statement was added that "VE incentive payments do not constitute profit or fee subject to the limitations imposed by 10 U.S.C. 2306(d)." Sharing rates were no longer negotiated between a "normal" and a "maximum" rate - they were standardized and were identical to those in the current FAR clause, paragraph (f) with two major exceptions. For incentive-type contracts, the sharing was 65/35 (Government/ contractor) on an Incentive sharing arrangement and 80/20 on a Program Requirement. For Cost Reimbursement contracts (other than CPIF and CPAF) an Incentive share was "not applicable." The collateral share was raised from 10% of one year's savings to 20% and the limitations on the amount of the contractor's share were established at the same levels as in the current FAR clause. Government-furnished material (GFM) was removed as an exception to collateral savings and now all savings in Government-furnished property (GFP) was considered to be collateral. The sharing period was changed in that the beginning was no longer computed from the date of acceptance of the VECP; the share period clock now doesn't begin until delivery of the first item incorporating the VECP. This is a much more liberal interpretation and would likely increase the period during which the Instant contract holder would share in future savings. The negotiation of a share period was removed and the period was set at three years. A Contracting Officer check list was included for guidance. For the first time, unsolicited VE Change Proposals were recognized, with sharing to be the same as Collateral sharing (this recognition of unsolicited VECPs continued until August of 1977 (DPC 76-9) when such recognition was withdrawn largely because of the Grismac

decision). A requirement was added that contractors must put a VE clause in all subcontracts greater than \$100,000 and recovery of Government costs was now prescribed to be made prior to sharing net savings. Sharing was limited to contracts awarded by the same contracting office that awarded the Instant contract (rather than the Military Department or the Procuring Activity as in previous clauses). Submission of preliminary VECPs may be required by the Contracting Officer. A 6-month or less period was established for payment of royalties and the clause date was changed from "(1971 MAY)" to "(1974 APR)."

A relatively minor change appeared to have been made in DPC 76-7 (27 February 1976) but this change had significant impact on how incentive-type contracts would be shared in later versions of the clause. A clarification was made to permit sharing on incentive-type contracts either on the established 65%/35% (for Incentive sharing) or 80%/20% (Program Requirement) as stated in the sharing matrix OR to share under the incentive structure of the Instant contract with no adjustment to targets or ceiling. The current clause contains only the latter sharing arrangement, although the clause language requires close reading to come to that conclusion.

The clause date was changed from "(1974 APR)" to "(1976 JUL)" in the 1 July 1976 edition of the ASPR. The only other change made by this edition was to incorporate the changes from DPC 75-7. There were some significant changes (one of which was quickly revised) contained in DPC 76-8, dated 15 June 1977. There were detailed descriptions/definitions of Instant, Concurrent and Future contract savings. The definition of Instant contract savings, however, read, "those measurable net reductions in the price of the contract under which the value change proposal was submitted. . . ." That was corrected to "cost reductions" in DPC 76-9. The 45-day processing standard for the Government was established, which standard continues into the current FAR clause. Another provision of DPC 76-8 provided for an Incentive sharing arrangement for cost reimbursement contracts other than CPIF and CPAF contracts. In previous matrices, that cost reimbursement block was marked "N/A"; now a share of 75/25 was prescribed.

DPC 76-9 (30 August 1977), in addition to correcting the definition of Instant contract savings, contained two major changes. The paragraph dealing with data rights had previously given the Government unlimited rights to the VECP. This DPC change restricted the Government's rights to that data qualifying and submitted as limited rights technical data. The other change removed the unsolicited VECP provision (instituted in DPC 121) as a consequence of the Grismac decision.

DAC 76-26 (15 December 1980) contained two major changes - it formalized the Low Rate Initial Production (LRIP) or Engineering Development modification to the clause and changed the method of sharing on incentive-type contracts to that contained in the current FAR clause (contractors would share under the incentive structure of the Instant contract on the same basis as any other cost reduction with no adjustment of targets or ceiling). The DAC was also a major rewrite that completed the transformation of the DAR clause to that of the current FAR format. An additional change was made by DAC 76-39, dated 20 October 1982, in that the no-cost settlement method was added.

With the issuance of the FAR on 1 April 1984, the only change was a change of clause date from "(1976 JUL)" to "(APR 1984)" but the remainder of the clause (and Part 48) was unchanged from the DAR. The FAR equivalent of the DAR's Part 1-1700 is now Part 48 (the policy guidance section) and the clauses in DAR 7-104.44 became FAR 52.248-1, -2, and -3. The only other FAR clause since the original April 1984 issue was the reissuance in March 1989. This reissue removed the expanded sharing base and also changed the clause date from "(APR 1984)" to "(MAR 1989)."

#### MAJOR PROBLEMS IN THE CURRENT CLAUSE

Collateral Savings: Despite the evolution into the precisely-worded clause we have in today's FAR, there are several problems that must be addressed to reduce interpretation errors and clarify it. There is a noticeable lack of consistency of wording between FAR Part 48 and FAR 52.248-1, the most glaring of which is in the area of collateral savings. In paragraph 48.104-2(b), collateral savings are defined to be "20 percent of the estimated savings to be realized during an average year of use. . .

." while the clause, in paragraph 52.248-1(j) defines the same sharing to be, "20% of any projected collateral savings determined to be realized in a typical year of use. . . ." Anyone with a basic knowledge of statistics can name at least three measures of central tendency ("average") and the inconsistency is further exacerbated by the lack of definitiveness as to what "typical" means. Also in the area of collateral savings, there exists a perception on the part of many contractors that collateral sharing is inequitable and should be expanded. A possible solution to some of these dilemmas is discussed below.

Incentive-Type Contracts, Multi-year Contracts, Cost Allowability, and Other Problems. There is also a definite lack of clarity as to how incentive-type contracts should be adjusted. The previous ASPR and DAR clauses were more explicit and a return to this definitization will be suggested. Because of agency interpretations, there is some confusion as to how multi-year contracts should be considered and this requires clarification. Another noticeable lack is that there is no provision in the current clause for sharing cost avoidances in the acquisition savings area. In addition, there is considerable confusion between contractors and Government auditors as to how contractor costs expended to develop VECPs should be treated should that VECP submission be rejected. Possible solutions are discussed in the section below. There are a number of instances where the language in FAR Part 48 differs from the language used in the Part 52.248 clauses. These disparities need to be cleaned up. Many activities feel that profit should be allowed the contractor if there is a negative instant contract savings situation while others do not permit any profit on a VECP. These latter Contracting Officers feel that the contractor's share is their "profit" for the effort. The clause should provide more explicit guidance so that confusion can be avoided by all parties.

#### CHANGES BEING PROPOSED IN THE CLAUSE — FROM WELLSPRINGS TO GROUNDSWELLS

Collateral Savings: The Army, as a result of the output from a Process Action Team (PAT), is making a recommendation to the DAR Council that collateral savings be based on a percentage share of an "average" year of use and, further, that the average be defined as "the arithmetic mean." In addition, a recommendation is being made that the contractor receive a 100% share rather than the current 20% share of that average year of identified collateral savings.

V.2 RAM-D. DAR Case 91-948-02, as of this writing, is making its way through the regulation change process, and this change deals with the "Reliability, Availability, Maintainability and Durability" issue, also called RAM-D. The RAM-D process was used as a class deviation to the FAR but, upon expiration of the deviation, is being continued as an attempt to change the FAR permanently. This proposal will permit contractors to share in cost avoidances by extending an acquisition share to the reduction in required quantities because of a VECP that extends the useful life of an item such that fewer quantities are needed in the future. There are some problems with the wording of the change but it is felt that those can be resolved and that contractors submitting VECPs can be equitably rewarded for their cost reduction proposals.

Cost Allowability: The problems stemming from differing interpretations of the cost allowability issue are addressed in DAR Case 89-010, Cost Allowability. Some contractors (those with tight profit pictures and an apparent surplus of overhead available) feel that the cost of developing a VECP should be an allowable *indirect* expense regardless of whether or not that VECP is accepted or rejected. The current clause (in Part 48.101(b)(1)) only states that "the contractor uses its own resources to develop and submit any VE change proposals (VECP's)." The definition of "own resources" is open to considerable interpretation and has led to the request for the DAR Case. Other contractors, on the other hand, continue to be willing to fund VECPs out of their profits, receiving reimbursement if the VECP is accepted and being willing to absorb the development costs in their profits if the VECP is rejected. They do not want their overheads raised as they feel this will place them in a less desirable competitive position. A resolution on this DAR Case is likely to be made prior to the presentation of this paper.

The Department of Defense, almost from the beginning of the use of VA concepts, was the only federal agency to really use and promote VE in its contracts. There was some minor efforts by others but nothing of significance. In an effort to expand the cost reduction potential of this concept, the Office of Management and Budget issued its OMB Circular A-131 on 26 January 1988 with the purported purpose of "requir[ing] the use of VE . . . by Federal Departments and agencies to identify and reduce nonessential procurement and program costs." The policy paragraph was imperative ("shall") in requiring agencies to use VE and the Circular got a number of Federal agencies "on board" the VE bandwagon. However, because of some loopholes (such as the use of the term "where appropriate"), the Circular was reissued effective 21 May 1993. This reissue contained more definition as to where the use of VE is considered appropriate (as well as where it might not be applicable) so that agencies could not use quite as liberal an interpretation in making their decisions as to whether or not to use VE. The new circular also contains reporting requirements replacing the previous ad hoc reporting. Having the FAR, which is used by all federal agencies, buttressed by OMB Circular A-131, certainly has and will continue to facilitate the promulgation of VE throughout the federal government.

Should anyone have copies of these documents and would make them available for copying, it would be most appreciated. Please contact the author if you have any or all of them.

#### REFERENCES

1. *Management of VE; Contractual Aspects of VE* (PPM 306) resident textbook, 1988 edition; Air Force Institute of Technology, Wright-Patterson AFB, OH.
2. Federal Acquisition Regulation, March 1989.
3. Grismac Corp.; USCC Dkt 4-72, 22 CCF, para 80,252, April 22, 1976 and USCC Dkt 4-72, 23 CCF, para 81,336, May 19, 1977.
4. Executive Office of the President; Office of Management and Budget; Washington, DC; OMB Circular A-131, January 26, 1988.
5. Executive Office of the President; Office of Management and Budget; Washington, DC; OMB Circular A-131, May 21, 1993.

#### THE FUTURE — CONTINUAL IMPROVEMENT CONTINUED EVOLUTION

The acquisition environment being faced by the U. S. Government and its contractors is changing and will require change on the part of all parties if we are to survive. One of the critical concepts that will provide the requisite cost savings is VE/VA. The clause, as we have seen, has always been responsive to changed needs and will continue to do so. The individuals who are most involved in the contractual side of VE/VA will continue to watch the fires and will do whatever is necessary to make certain that the flames continue burning.

#### HISTORY OF THE VE CLAUSE

<u>Change</u>	<u>Date of change of Change</u>
* ASPR Revision 45	April 1959
* ASPR Revision 8	15 March 1962
ASPR Revision 13	31 December 1962
ASPR Revision 3	15 November 1963
* ASPR Revision 4	March 1964
* ASPR Revision 5	11 May 1964
ASPR Revision 6	1 July 1964
DPC 11	9 October 1964
DPC 19	30 November 1964
DPC 22	29 January 1965
DPC 26	8 April 1965
DPC 28	24 May 1965
* DPC 36	21 October 1965
DPC 39	16 March 1966
ASPR Revision 23	1 June 1967
* ASPR Revision 24	August 1967
DPC 55	28 September 1967
* DPC 56	6 October 1967
DPC 64	28 October 1968
DPC 65	20 December 1968
ASPR Revision 3	30 June 1969
DPC 88	20 May 1971
ASPR edition of -	16 April 1973
DPC 121	10 May 1974
ASPR edition of -	1 July 1974
ASPR edition of -	1 October 1975
DPC 75-7	27 February 1976
ASPR edition of -	1 July 1976
DPC 76-7	29 April 1977
DPC 76-8	15 June 1977
DPC 76-9	30 August 1977
DPC 76-10	26 September 1977
DPC 76-12	28 October 1977
DPC 76-13	18 November 1977
DAC 76-26	15 December 1980
DAC 76-39	20 October 1982
FAR	1 April 1984
FAR	March 1989

\* Not included in Prof Pryor's files and not consulted.