DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF STAFF
WASHINGTON, DC 20310-0200

REPLY TO
ATTENTION OF

DACS-DME

27 JUN 1990

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Value Engineering (VE) Program

1. Army Regulation AR 5-4, August 1976, Department of the Army Productivity Improvement Program, containing VE policy is currently under revision.

2. The VE chapter of the AR titled "Value Engineering Program" has already been revised, staffed with MACOMs, and comments/ changes incorporated as appropriate.

3. Pending the publication of the completely revised AR 5-4 later this year, the attached VE chapter supersedes VE policy contained in the August 1976 AR and is forwarded for your immediate implementation.

4. Point of contact at HQDA is Mr. Henry Mlodozeniec (202) 695-1768 or AV 225-6931.

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27 JUN 1990

AR 5-4, Chapter 2

Value Engineering Program

1-1. General

a. The Value Engineering Program is an organized effort directed at analyzing the function(s) of--

(1) Army systems.

(2) Operations.

(3) Maintenance.

(4) Equipment

(5) Design and Construction.

(6) Procedures.

(7) Methods.

(8) Acquisition.

b. The VE Program strives to achieve the required function(s) at the lowest cost consistent with requirements for performance, quality, reliability, maintainability, and safety. In that sense it is very much in tune with the Total Quality Management (TQM) philosophy which seeks continuous quality improvement and reduction in cost, through process control.

c. This chapter of AR 5-4 prescribes regulatory conduct of the Army VE Program, develops program objectives and policies, and assigns responsibilities for planning, staffing, funding, implementing, directing, and maintaining an effective Army VE Program.

1-2. Program Objectives

a. To reduce the overall cost of Army operations, supplies, and services by--

(1) Eliminating or modifying nonessential characteristics and functions of systems and equipments.

(2) Extending financial, manpower, and materiel resources.

(3) Fostering timely adoption of economically advantageous technical advances.

(4) Simplifying Army materiel thereby gaining general improvements in operational readiness and logistic support.

(5) Instilling cost and value consciousness in Army personnel.

(6) Assuring that recognition and adequate awards are given to individuals, groups and organizations which have generated savings utilizing VE methodology. (See AR 672-20.)

b. To obtain total value improvement in research, development, procurement, production, product assurance, construction, operations, maintenance, logistics, procedures, and organizations.

1-3. Concept

a. Reductions in cost are frequently possible due to advances in technology, additional information from testing, user feedback, and changes in user requirements.

b. The VE discipline represents an intensified examination of that portion (generally 10-20 percent of system components, facilities equipment, item, or procedure) which is highest in cost or represents the lowest value. It provides specific techniques (identification and analysis of functions, cost

targets, and cost visibility) to improve the cost constraining capability of the engineering (or systems engineering) process. As such, it can be used to assist in financial management of technical requirements and in a broader sense, as a strategy for managing restricted budget.

c. The VE discipline can be applied profitably to systems, equipment, items, facilities, supplies, operations, maintenance, procedures, and organizations, being designed, developed, procured, produced, operated, maintained, or modified.

d. Value Engineering as a methodology should be incorporated and accomplished as early as possible (for example, before design release) to maximize savings. Value Engineering is precluded only in those rare instances where the cost of the VE effort and subsequent implementation would be greater than the savings potential. Later VE, normally increases implementation costs and may affect smaller quantities. However, such deterrents are frequently more than offset by advances in technology, additional available information, and the recognized potential for substantial VE savings.

e. Special consideration and emphasis must be given during the operational cycle of equipment not specifically developed for a major purpose (that is, commercial equipment procured with modification and/or changes to fulfill a DoD need). Very often, the operation and maintenance of this type of equipment, over the life cycle, represents a far larger investment over the original equipment purchase and/or installation costs. Under these conditions, VE must be vigorously applied as early as possible to

the operations and maintenance cycle to include procedures, processes, and operational concepts.

f. Since most of the design and manufacture of defense materiel is accomplished by industry, use of VE contract provisions as set forth in Parts 48 and 52 of the Federal Acquisition Regulations is necessary to supplement internal Army VE activity.

g. Proper application of the VE discipline and VE contract provisions at the contractor and sub-contractor level.can contribute to:

(1) Making essential requirements economically feasible.

(2) Avoiding cost growth.

(3) Economically updating items in the inventory.

(4) Simplifying defense materiel, with attendant improvements in capability and readiness.

h. The VE discipline and contract provisions in the Federal Acquisition Regulations Parts 48 and 52 provide architects, engineers, technicians, and managers with specific capabilities for fulfilling their responsibilities to meet performance and schedule requirements at minimum cost.

i. The VE discipline can be applied by the individual, team, or task force approach, depending on local operating circumstances and the specific project.

j. VE benefits can be measured in both dollars and technical terms. Periodic management reporting of VE cost savings and value improvements can provide an indication of the relative cost consciousness of personnel and organizations.

Realized non-quantified technical benefits, such as improvements in quality, reliability, maintainability, human factors, performance, and weight/size reductions, may be identified separately, and reported in a narrative fashion.

1-4. VE policy

a. Each Major Command, program executive office or operating agency will apply VE to their respective programs to improve military worth and/or reduce costs. The VE methodology will be used to eliminate unnecessary costs in all phases of the life cycle of Army materiel. The term Value Engineering is used interchangeably with the terms, Value Analysis and Value Management and applies to hardware as well as software in support of the hardware. HQDA (DACS-DME) assigns fiscal year VE goals to Major Army Commands (MACOMs) and agencies. The goals (number of in-house Value Engineering Proposals (VEPs), number of contractor Value Engineering Change Proposals (VECPs), and dollar savings) will be sub-allocated by the MACOMs/Agencies to their immediate subordinate functional elements, PEOs and program/project managers. HQDA utilizes participative management to arrive at VE goals. The goal setting equation contains MACOM/Agency/ PEO input pertaining to current mission, program phase, previous year VE performance, and other factors pertinent to arriving at a challenging, but attainable goal. Sub-allocation of VE goals by MACOMs/Agencys/ PEOs must similarily include participative management and coordination with the on-site VE manager. While it is recognized that the PEO has a direct line of authority to HQDA and could be assigned a VE goal

from HQDA and report his accomplishments directly to DACS-DME, it is only prudent that he take advantage of the established VE reporting system existent at the MACOM and the support that the MACOM can provide towards a successful PEO VE Program. VE considerations will be made a part of program management documentation. Technical decision points will be established by the MACOMs, PEOs, or Agencies functional management, for the periodic assessment of the progress towards goals. MACOMs, PEOs, and agencies will ensure the prompt technical evaluation and processing of in-house Value Engineering Proposals (VEPs) and contractor Value Engineering Change Proposals (VECPs). VE accomplishments creditable towards the assigned VE goals will be documented and reported at the originating level of the VE action. MACOMs and Agencies will take steps to ensure that there is no duplication of savings claims under other programs.

b. Derivation of costs and benefits. VE utilizes economic analysis as a management tool in evaluating the cost effectiveness of alternatives under consideration. Accordingly, AR 11-28 will be used as a guide in the derivation of costs and benefits in support of VEPs and VECPs submitted for approval. All costs and benefits will then be summarized in accord with the instructions and formats of this regulation.

c. Funding.

(1) In recognition of the overall cost benefits to be derived, MACOMs, PEOs, and Agencies will include in annual budget estimates and operating budgets such amounts as are necessary to pay for--

(a) VE projects.

(b) Development, testing and implementation of in-house VEPS or contractor submitted VECPs.

(c) Contractor VE incentive shares when savings occur in future budget years or in different budget accounts.

(d) VE Program Requirement clauses.

(e) VE training.

(f) Special in-house VE Task Group Studies.

(g) VE studies by third party contractor

(i) Operation of a VE data base.

(2) MACOM's, PEOs, and agencies are responsible for programming, budgeting and identifying adequate resources to finance VE initiatives. This will be accomplished through the regular budget process. Criteria for the use of VE resources and the selection of VE projects, will be established by MACOMs, PEOs, and Agencies.

d. Inclusion in contracts. VE provisions will be included in all contracts for supplies, services, facilities, and materiel as provided in Parts 48 and 52 of the Federal Acquisition Regulations (FAR), and OMB Circular A-131, and applicable Defense Acquisition Circulars. All construction contracts for ten million dollars and over will be subjected to VE studies. Construction projects costing two million dollars or more should be given serious consideration for VE studies, resources permitting.

e. Processing VEPs and VECPs. MACOMs, PEOs and agencies will maximize the benefits from VEPs and VECPs through objective evaluation and expedited processing as follows:

this capability is normally placed within the Productivity Program Organization. In industrially-oriented organizations, this capability will be placed where it can simultaneously manage the VE program in development, production, and maintenance without being constrained by a single organizational unit's mission and functions. In this situation, the VE organization can usually function best from a staff level position. Staffing guidance is provided for MACOMs and agencies responsible for implementing the principles and applications of VE so that they can maintain a viable VE capability. Normally, this capability requires one full-time VE action officer for each 500 personnel up to 2,000 and one additional VE action officer for each 1,000 thereafter.

h. Command emphasis. VE will be given full recognition, primary emphasis, and support by commanders, program executive officers, technical directors, program and project or product managers, and chiefs of operating agencies having responsibility for research, development, test and evaluation (RDTE), procurement, production, product assurance, operations and services, maintenance, supply, transportation, construction, storage and final disposition of Army materiel and facilities.

i. Coordination between functional and program/project personnel. Successful development and processing of VE actions will require the coordinated action of functional and project or product management organizations. Successful funding of VE effort requires close coordination with the respective appropriations directors.

j. Training. Military and civilian personnel (engineers,

program executive/program management office staffs) assigned to manage and execute the VE program will receive as a minimum the 40 hour course in the Principles and Applications of VE (PAVE), the Value Analysis for Administrative and Service Activities Course (VAASA), as well as the 40 hour course in the Contractual Aspects of VE (CAVE). Procurement and contract administration personnel, negotiators, and Contract Specialists will, as a minimum, attend the 40 hour CAVE course. Facilities construction technical staff members will attend construction specific VE courses provided by USACE.

k. Inclusion of VE Plan in program management documents. A plan to conduct VE on a systematic basis for each RDTE project will be established and included in Program Management Documents. The plan will form an integral part of the acquisition strategy and will include a time-phased schedule to conduct VE during the Full Scale Development Phase.

(1) VE and life cycle management. VE principles and methodology will be used to promote the fielding of equipment with optimum life cycle cost effectiveness. They will be included throughout the materiel life cycle i.e., conceptual, validation, development, production, and deployment phases, and include operations, maintenance, and rebuild. In construction programs, optimum life cycle cost effectiveness will be achieved by applying VE techniques at the concept phase and beyond.

m. Inclusion of VE changes in item or system technical data packages. Approved VECP changes will be expeditiously included in the technical data package of the item or system and used with future contracts and other materiel to which such changes may

apply. Approved VE changes to item or systems subsequent to type classification will be reflected in the technical procurement data to be used for future procurement of those or like items/systems. Such VE changes will be screened to determine whether type reclassification is required under AR 70-6. When proposed VE changes are not approved, the VE files maintained at the MACOM or agency operating elements will be documented to indicate that consideration was given to the proposed design change and the reasons the resource conserving improvements could not be accommodated (see OMB Circular A-131)..

n. Composition of VE task teams. Maximum use will be made of VE task teams, representing required functional disciplines, when in-house VE studies are performed. Other organizations, that is, Procurement and Comptroller/Resource Management, will provide the specialized capabilities, such as, pricing and cost analysis, as necessary, to the VE process. The centralized VE organization will assist functional and project or product management organizations in performing VE to reduce cost of materiel, functions, operations, maintenance, and services.

o. In-house VE Study. A study or project may only be reported as an in-house VE study if (1) and (2) below are satisfied:

(1) It was identified as a VE project prior to presentation of specific proposals for decision.

(2) Evidence of application of VE discipline is available (that is, function analysis, evaluation of worth, cost comparisons, and so forth).

p. Validation and reporting of savings. All level of savings

will be reported; however, accepted and implemented individual VEPs and VECPs with net 3-year benefits equal to or greater than one million dollars shall be reviewed by a designated executive of the reporting organization to assure the validity of the claimed savings. Similarly, rejected VEPs and VECPs in the above net savings category, will be subjected to executive review for affirmation of rejection rationale. Records substantiating all reported savings/VE actions will be maintained in the organization's VEPM office to support the semiannual Statistical Summary of VE Actions at appendix B.

(1) All implemented VEPs will have the following:

a. Identification of the Army Management Structure (AMS) code to benefit from the savings. Operation and Maintenance, Army (OMA) savings require a six digit program element to identify reapplication. Procurement savings require a systems study number (SSN) as well as a budget line item number to identify reapplication of savings.

b. Planned/actual utilization of the budget savings and the impact on that organization's budget.

(2) Reported VECP savings will be substantiated by having a file copy of all pertinent contract modifications implementing and settling the VECP available at the VEPM office.

1-5. VE Responsibilities

a. The Office of Chief of Staff Army (OCSA), Management Directorate --

(1) Is responsible for Army-wide direction, management, and execution of the DA VE Program and for formulating, establishing, and maintaining Army policy on VE.

(2) Furnishes budget guidance to MACOMs and agencies for funding the VE Program at a level which will realize its optimum potential.

(3) Designates a full-time VE Program Director to--

(a) Develop, direct, and execute the Army's VE Program.

(b) Serve as Army point of contact on VE matters with OMB, OSD, DOD components, other Government agencies, industrial associations, and professional and technical societies.

(4) Provides an Army senior representative to serve as the Chairman of the Defense Acquisition Regulatory Council (DARC) VE Committee, and to participate as Army member of the DOD VE Committee.

(5) Establishes and maintain active and aggressive in-house and contractor VE Programs.

(6) Plans, programs, directs, and coordinates the use of VE in--

(a) Research

(b) Development

(c) Procurement

(d) Production

(e) Product Assurance

(f) Design and construction

(g) Operations

(h) Maintenance

(i) Logistics

(j) Procedures

(k) Organizations

(7) Establishes objectives and assigns Army VE goals (number of VECPs, VEPs, and dollar savings), measures progress against these goals, and evaluates the effectiveness of the VE Program.

(8) Promotes and maintains a professional VE staff within the Army, and assures that key personnel are adequately trained and that VE training programs are established and kept current.

(9) Assures that contractor VECPs are objectively and promptly evaluated and that contract modifications implementing and settling accepted VECPs are accomplished expeditiously.

(10) Reviews Army-wide VE personnel resources of MACOMs and Agencies and takes action to assure that adequate resources are available to support an effective VE Program.

(11) Provides for the crossfeeding of those VEP's and VECPs that have Army-wide application.

b. The Office of ASA for Research, Development, and Acquisition (OASA RDA)

(1) Designates a research, development and acquisition (RDA) VE coordinator as point of contact on VE RDA matters.

(2) Provides management emphasis to ensure the utilization of VE clauses in contracts so that VE continues to be a contributing element to Total Quality Management and assists in meeting design-to-unit production cost (DTUPC) targets as prescribed in AR 70-64.

c. Commanders of Army Major Commands, Program Executive Officers, Program/Project Managers and field operating agencies will--

(1) Establish and maintain an active and aggressive VE

Program, to include an in-house and contractual VE effort, and assign such resources to the program as may be necessary to achieve assigned goals and objectives. A successfully managed VE Program produces net dollar savings that when properly documented can be used to reduce resource requirements, or can be reapplied to approved but unfinanced requirements. Reapplication should be at the organizational level that created the savings to foster an incentive for greater participation in the VE Program.

(2) Designate a qualified individual to be the Value Engineering Program Manager (VEPM). The VEPM positions at MACOMs will be full-time assignments. The full-time individual will be chartered and appointed as VEPM by his or her organization. The VEPM will be delegated authority to conduct an effective VE Program and will be supported by an identifiable VE organization with resources and full time staffing to effectively carry-out responsibilities.

(3) Assure that in-house VE studies to reduce cost and increase military worth are identified and conducted in a timely fashion.

(4) Establish a capability and conduct VE "mixed skill" task team studies within ARMY and contractor organizations to reduce high cost areas and those which are over "design-to-cost" targets.

(5) Integrate the use of VE principles in RDTE projects.

(6) Ensure that VE assists in establishing Design to Unit Production Cost (DTUPC) targets and in tracking and achieving them from research and development (R&D) through initial production of the mission systems/items.

(7) Integrate the use of VE principles in the design, construction, operation, and maintenance of Army facilities.

(8) Integrate the use of VE principles during the operation and maintenance of Army equipment, systems, and procedures to the maximum degree possible as a responsibility of the operational commands.

(9) Indentify specific cost drivers in high cost areas and assure that resources are made available to perform VE analysis to lower the costs.

(10) Include a funded VE Program Requirement Clause (VEPRC) in initial production contracts for all major systems and other appropriate production contracts of $10 million and over. The VEPRC shall be monitored (SEE MIL-STD-1771) to ensure contract compliance and to determine progress of resultant dollar savings versus VEPRC cost.

(11) Encourage contractors to submit technically sound, resource conserving VECPs. Responsibility for major portions of this VE effort shall be assigned to line and program/project managers, program directors, procurement and contracting personnel.

(12) Ensure establishment of necessary controls to assure objective and prompt processing of VECPs. Maintain in the contract file a record of the processing time for each VECP including the date received, the date approved for implementation or rejected, and the total number of days from receipt until approval or rejection. Use the Statistical Summary of Value Engineering Actions (Appendix B) to report VECP average processing time and the number of VECPs requiring more than 45

days to accept or reject.

(13) Ensure that cognizant design and engineering support elements participate in the development and evaluation of in-house VE proposals.

(14) Allocate VECP, VEP and dollar savings goals down to operating levels (project and line management organizations).

(15) Ensure that a crossfeed of all approved implemented VEPs and implemented/settled VECPs will be effected by entering abstracts into the Value Engineering Data Information Storage and Retrieval System (VEDISARS), or other appropriate DoD VE data base.

(16) Conduct periodic management reviews (review and analysis) of VE activities in order to place increased emphasis and priority on in-house VEPs and contractor-originated VECPs which have large cost savings potential. This will include, as a minimum, a review of--

(a) In-house VE results.

(b) Results from use of VE contract provisions.

(c) Processing time for evaluation and action of VEPs and VECPs.

(d) The number and status of formal in-house VE projects at the operating level. Which elements of the organization are not participating, not meeting their VE goals, and why not.

(e) Participation in crossfeed of approved VEPs and VECPs applicable to other Army activities.

(17) Ensure that managers, architects, engineers, technicians, buyers, auditors, logisticians, contracting

officers, and negotiators understand Army VE objectives, precepts, policies, goals, methods, contract incentives, and program clause provisions. The VE courses listed in the Defense Catalog, DoD 5010.16-C, or specialized VE courses, will be utilized as appropriate for military and civilian personnel supporting VE activities.

(18) Publicize benefits achieved through the Army VE Program, locally, and at industrial fairs and technical shows.

(19) Prepare a Semiannual Statistical Summary of VE Actions in accordance with the provisions of paragraph 1-4p and appendix B. Attach selected "before and after" implemented VE examples that your organization is particularily proud of.

(20) Establish and maintain an annual MACOM VE Program master plan, containing budgeting objectives, VE goals developed in conjunction with PEOs and with subordinate activities and including, but not limited to strategies, training, staffing, contractual projects, task team efforts, and in-house projects to attain the VE goals and objective. Progress against the plan shall be reviewed quarterly by senior MACOM/PEO officials. Each MACOM shall forward a copy of its annual VE Program master plan for the new fiscal year to HQDA (DACS-DME) by not later than 15 November.

(21) Recognize deserving individuals. Approved and implemented VEPs are the result of the application of Value Engineering methodology by innovative, and imaginative people. Individuals and/or teams displaying ingenuity and creativity that leads to implemented resource conserving VEPs need to be recognized and monetarily rewarded in accord with chapter 4, AR

672-20. DA Form 1256, Incentive Awards Nomination and Approval, will be accompanied by a complete copy of the approved and implemented VEP package, suitably indexed to display the supporting data and justification for a Special Act Award for Incentive Awards Committee consideration.

(22) In addition to monetary awards, there are DoD VE Honorary Achievment Awards presented annually. These VE awards are based on validated FY savings benefits ($1 million or more resulting from approved implemented and settled VECPs/VEPs) and other considerations such as the savings benefits as a percent of the affected budget, additional non-dollar benefits to the DoD, and consistency/quality of the continuing VE activity. Annually, in September, HQDA (DACS-DME) issues a call letter for MACOM nominations in each of seven Award categories.

1-6. Reporting requirements

In accord with instructions in appendix B, MACOMs and agencies responsible for processing and evaluating contractor-originated VECPs and/or in-house VEPs will submit semiannually to HQDA (DACS-DME), Wash, DC 20310-0200, the Statistical Summary of VE Actions Report. The MACOM prepared Statistical Summary of VE Actions will include PEO Office and Individual Reporting Program/Project Manager VE accomplishments. Two copies of the report will be forwarded to HQDA. It is due within 30 days after the end of the reporting period (that is, 30 April and 30 October, annually).

Appendix A

References

CIR A-131	OFFICE OF MANAGEMENT & BUDGET CIRCULAR
FAR	FEDERAL ACQUISITION REGULATION PARTS 48 & 52)
DAC 86-6	DEFENSE ACQUISITION CIRCULAR
DOD 5010.16-C	DEFENSE MANAGEMENT EDUCATION AND TRAINING
DODD 4245.8	VALUE ENGINEERING
DODM 4270/Form 1426	
MIL STD 1771	PROGRAM REQUIREMENT
MIL STD 480B	CONFIGURATION CONTROL
MIL STD 481B	CONFIGURATION CONTROL (Short Form)
AR 5-4	DEPARTMENT OF THE ARMY PRODUCTIVITY MANAGEMENT
AR 11-28	ECONOMIC ANALYSIS AND PROGRAM EVALUATION
AR 37-100-FY	ARMY MANAGEMENT STRUCTURE
AR 70-1	ARMY RESEARCH, DEVELOPMENT, TEST & EVALUATION
AR 70-15	PRODUCT IMPROVEMENT OF MATERIAL
AR 70-37	CONFIGURATION MANAGEMENT
AR 71-6	TYPE CLASSIFICATION/RECLASSIFICATION OF ARMY MATERIAL
AR 672-20	INCENTIVE AWARDS
PA PAM 5-4-5	VALUE ENGINEERING HANDBOOK

Appendix B

Instructions for Preparing the Statistical Summary of Value Engineering Actions

A sample format for a statistical summary of VE actions is at figure B-1. Instructions for completing the format are explained in the following paragraphs. All entries are cumulative from beginning of fiscal year to end of reporting period.

(A). Reporting activity

Enter the name of reporting MACOM or agency and the FY period covered in the report. PEOs provide data to MACOMs for display and consolidation in the MACOM report.

(B). Personnel Resources. Number of full time Value Engineering personnel on board at the end of the reporting period, and number of full time equivalents.

(C) Value Engineering Proposals (VEPS).

Item C.1. to C.4 The benefits resulting from in-house VE actions shall be included in the annual statistical summary only if (a) the action was identified as VE before presentation for management decision and (b) it is supported by evidence of the application of the three major elements of the VE discipline (i.e. analysis for function, evaluation of worth, and cost comparisons). In-house VE actions include VEPs submitted by a contractor employed by a MACOM, PEO, or Agency to provide VE services. An in-house VE action shall be reported only if it was implemented, and submitted for entry into a DoD VE data base. VE

benefits included in accomplishments reported through other channels may be separately identified in paragraph I narratives, but are excluded from total savings reported in the VE Program.

Item C.3. Internal VE actions with estimated savings of $1,000,000 or more shall be verified by an executive review of the validating independent cost analysis.

Item C.4. The estimate of direct costs of in-house program activities is to include personnel salaries and overhead expenses, training costs, travel costs, costs for contracting for VE services and any other costs associated with the in-house VE program.

(D). Value Engineering Change Proposals (VECPs)

Report all VECPs received under both incentive clauses and program requirement clauses.

Item D.1. to D.6. Number received, number implemented. These are self explanatory. For item D.3 report only those VECPs that have been approved technically, the contract modifications have been negotiated and completed, and the action has been submitted for entry into a DoD VE data base. The sharing period, usually three years, may vary according to the contract terms and the nature of the VECP. Include collateral benefits, if any, only if the contractor has received a share of the collateral benefits. Estimate the Government's share of collateral savings for the same time period as the acquisition saving period.

Item D.4. Estimate all personnel salaries, overhead expenses, training costs, travel costs, and other direct government costs incurred to support the development, evaluation and implementation of contractor VECPs.

APPENDIX C

ABBREVIATIONS AND ACRONYMS

AMEC	US ARMY MANAGEMENT ENGINEERING COLLEGE
AR	ARMY REGULATION
COA	COMPTROLLER OF THE ARMY
DA	DEPARTMENT OF THE ARMY
USAMC	US ARMY MATERIEL COMMAND
DAPM	DEPARTMENT OF THE ARMY PRODUCTIVITY MANAGEMENT
SA	SECRETARY OF THE ARMY
SA(FM)	SECRETARY OF THE ARMY (FINANCIAL MANAGEMENT)
DOD	DEPARTMENT OF DEFENSE
DTUPC	DESIGN-TO-UNIT PRODUCTION COST
DACS-DM	DEPARTMENT OF THE ARMY CHIEF OF STAFF-DIRECTOR OF MANAGEMENT
FAR	FEDERAL ACQUISITION REGULATION
GOCO	GOVERNMENT-OWNED, CONTRACTOR-OPERATED
IE	INDUSTRIAL EQUIPMENT
HQDA	HEADQUARTERS, DEPARTMENT OF THE ARMY
MACOM	MAJOR COMMAND
MIPR	MILITARY INTERDEPARTMENTAL PURCHASE REQUEST
OMA	OPERATIONS AND MAINTENANCE, ARMY
OSD	OFFICE OF THE SECRETARY OF DEFENSE
RDTE	RESEARCH, DEVELOPMENT, TEST AND EVALUATION
VE	VALUE ENGINEERING
VECP	VALUE ENGINEERING CHANGE PROPOSAL
VEP	VALUE ENGINEERING PROPOSAL
VEPM	VALUE ENGINEERING PROGRAM MANAGER

Value Engineering (VE) Discipline. A sequential process for systematically analyzing the high cost areas of functional requirements of DoD systems, equipment, facilities, procedures, operations, maintenance, and materiel to achieve the essential functions at the lowest total cost of effective ownership, consistent with requirements for performance, reliability, quality, maintainability and safety.

Value Engineering Change Proposals (VECP). A specific cost reduction proposal, developed and submitted by a contractor under VE contract provisions, which requires a change to the contract specifications, purchase description, or statement of work.

Value Engineering Contract Incentives. Special provisions in Parts 48 and 52 FAR, as follows:

a. Value Engineering Incentive Clause. This clause is used in procurement and construction contracts to motivate contractors to submit proposals for changes in drawings, designs, specifications, or other contractual requirements for the purpose of stimulating cost reduction and to provide for compensation to contractors on acceptance of such proposals.

b. Value Engineering Program Requirement Clause
This clause is used primarily in design and development contracts, and to some extent in production contracts, to require the contractor to perform value engineering work at a stated level of effort during the course of performance of the contract, and to provide compensation for performance of such work and to share in savings resulting there from.

Value Engineering Task Force. Two or more VE task teams organized under single management.

Military Worth. The intrinsic value of military resulting from the possession of such characteristics as performance, reliability, maintainability, quality, producibility, and availability required to perform specific functions toward the attainment of a military mission.

Operational Value Engineering. Implies the timely application of VE and/or the VE contract incentive provisions.

Value Engineering Project. A project, one of whose primary objectives is to reduce costs, in which appropriate VE techniques are utilized. Projects may be accomplished by individuals, teams, or task forces. Formal VE projects are those identified as such to or by management.

Value Engineering Proposal (VEP). A specific proposal developed internally by Army personnel for total value improvement through the use of VE techniques.

Value Engineering Task Team. Teams of mixed specialties (normally engineering, projection, procurement, and estimating, organized to develop VE proposals on high cost areas for submission to the appropriate decisionmaking authorities. Normally they are led by a Value Engineer or a person skilled in engineering and also trained in VE.

Value Improvement. The result of effective VE application to existing management systems, resources, and materiel during all phases of a program's life cycle to increase the capability and efficiency of operation, deplete backlogs and/or decrease fund, time, manpower, and facility requirements.

Instant Contract. The contract under which a value engineering change proposal is accepted by the Federal Government.

Item D.5 and D.6. Self explanatory.

(E). Program requirement clauses

Report the number of VE Program requirement clauses placed in contracts to date this fiscal year.

(F). Funds specifically expended this FY for VE investment

Report funds in dollars expended this FY for VE investment in each of the categories of appropriations shown.

(G). Training

Number of personnel trained to date this fiscal year is self-explanatory.

(H). Major programs

For major programs completion of items H1 through H5 of the format is mandatory.

(I) Qualitative (non dollar) accompishments resulting from VE. In many instances the application of Value Engineering leads to reduction in weight and/or cubage, increase in quality, reliability, as well as other peripheral benefits that don't directly show up in the reported dollar savings and don't receive credit. This category of VE accomplishment gives your command/agency the opportunity to highlight such instances. Benefits accruing to other programs as a result of VE efforts, but not reportable as VE Program savings may also be highlighted.

B-3

Statistical Summary of Value Engineering Actions

A. Reporting Activity: _____ FY: _____

B. Personnel Resources

1. Number of full time VE personnel_____

2. Number of full-time equivalents_____

C. Value Engineering Proposals (VEPs)

1. Number of proposals submitted._____

2. Number of proposals implemented._____

3. Estimated net dollar benefits to the Army for three years following implementation.$_____

4. Direct costs to support in-house VE program$_____

D. VE Change Proposals (VECPs)

1. Number received_____

2. Number implemented_____

Figure B-1 Sample Format for

Statistical Summary of Value Engineering Actions

3. Estimated net dollar benefits to the Army for the contract sharing period$_____

4. Direct Government costs to support contractor VECP program $_____

5. Number of VECPs requiring more than 45 days to accept or reject._____

6. Average time interval in days from receipt of VECP to contract modification_____

E. Number of program requirement clauses placed in contracts to date this fiscal year _____

F. Funds specifically expended for value engineering activities

Appropriation:

1. RDT&E$_____

2. Procurement$_____

3. O&M$_____

4. MILCON$_____

5. Other$_____

6. Total$_____

G. Training: Number of personnel trained to date this FY in VE

1. Principles and Applications (40 hours)_____

2. Value Analysis Administrative and Service Activities (40 hours)_____

3. Contractual Aspects (40 hours)_____

4. Orientations (4 to 40 hours)_____

5. Seminars (2 to 4 hours)_____

Figure B-1

H. List all major programs as per DoDD 5000.1 and DoDD 5000.2 (with estimated total RDT&E costs greater than $200 million or with total procurement production costs greater than $1 billion), and for each program submit the following:

1. Program name

2. Number of VECPs submitted

3. Number of VECPs implemented by a contract modification

4. Estimated net dollar benefits to the Army during the contract sharing period.

5. Estimated dollar value of the contractor's share of savings from implemented VECPs reported in H.3., above

I. Provide narrative of qualitative (nondollar) accomplishments resulting from VE.