
OFFICE OF
THE INSPECTOR GENERAL

U.S. NUCLEAR
REGULATORY COMMISSION

REVIEW OF NRC'S IMPLEMENTATION
OF OMB CIRCULAR A-131,
VALUE ENGINEERING

OIG/96A-21 October 15, 1996

AUDIT REPORT



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REPORT SYNOPSIS

The Office of Management and Budget (OMB) issued Circular Number A-131, Value Engineering, on May 21, 1993, which requires Federal Departments and Agencies to use value engineering (VE) as a management tool to reduce program and acquisition costs. At OMB's request, the Nuclear Regulatory Commission's (NRC) Office of the Inspector General (OIG) audited the agency's implementation of Circular A-131. Our audit focused on assessing the adequacy of NRC's policies, procedures, and implementation of VE, since NRC reported no cost savings from VE for Fiscal Years 1994 and 1995.

We found that NRC has developed policies and procedures that generally meet Circular A-131's requirements. However, NRC has not applied the VE technique for analyzing agency programs and projects. Moreover, NRC senior managers believe VE's applicability to the types of contracts NRC awards is limited. Further, we found NRC is not fully implementing the Federal Acquisition Regulation (FAR) requirement to include VE clauses in contracts valued at over \$100,000. NRC management recognizes this problem and is committed to including VE clauses in appropriate future contracts.

We also learned that an upcoming OMB-led effort to revise Circular A-131 and possibly the FAR may address NRC's concerns about the applicability of VE to its contracts, and provide new incentives that encourage greater use of VE by NRC and other Federal agencies. Therefore, we have no recommendations to the agency in this report.

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INTRODUCTION

This report provides the results of the U.S. Nuclear Regulatory Commission (NRC), Office of the Inspector General's (OIG) review of NRC's implementation of Office of Management and Budget (OMB) Circular Number A-131, Value Engineering. The Circular, issued on May 21, 1993, requires Federal Departments and Agencies to use value engineering (VE) as a management tool, where appropriate, to reduce program and acquisition costs. Circular A-131 also requested Inspectors General to audit agency VE programs to: (1) validate the accuracy of agency reported VE savings, and (2) assess the adequacy of agency VE policies, procedures, and implementation of the Circular. This report addresses those subjects. Appendix I provides additional details on the objective, scope and methodology of this audit.

BACKGROUND

OMB states that VE is an effective technique for reducing costs, increasing productivity, and improving quality. As defined by the Federal Acquisition Reform Act of 1996 (FARA), VE is:

an analysis of the functions of a program, project, system, product, item of equipment, building, facility, service, or supply of an executive agency... directed at improving performance, reliability, quality, safety, and life-cycle costs.¹

Supporters state that VE can be successfully utilized in any industry or business process. It can be applied to hardware and software; specifications, standards, contract requirements, and other acquisition program documentation; and facilities design and construction. VE originated in the industrial community, and has spread to the Federal Government due to its potential for yielding a large return on investment. Its most extensive use has been in Federal acquisition programs.

¹Section 36 of the Office of Federal Procurement Policy Act, 41 U.S.C. 401, et seq., as amended by Section 4306 of the Federal Acquisition Reform Act of 1996, P.L. 104-106, February 10, 1996.

Circular A-131 noted that VE has long been recognized as an effective technique to lower the Government's cost while maintaining necessary quality levels. OMB told OIG that about \$1.5 billion in savings were reported by about 11 Federal agencies last year. Further, reports issued by GAO and agency Inspectors General have consistently concluded that greater use of this technique would result in additional savings to the Government.

FINDINGS

NRC reported no cost savings from the use of VE to OMB for Fiscal Years 1994 and 1995. This negates the need for OIG to validate the accuracy of the agency's reported savings, as requested in Circular A-131. Therefore, our audit focused on assessing the adequacy of NRC's VE policies and procedures, and its use of VE. We found that NRC has developed policies and procedures that generally meet Circular A-131's criteria. However, NRC has not applied VE techniques to its programs and projects. Further, NRC senior managers believe VE is not an appropriate tool for most NRC contracts. We also found that NRC generally has not followed the Federal Acquisition Regulations (FAR) to include VE clauses in contracts valued at over \$100,000.

Moreover, we learned that OMB plans to revise Circular A-131 and possibly the FAR in the near future, which may address NRC's concerns about the applicability of VE to its contracts and provide new incentives to NRC and other Federal agencies encouraging greater use of VE. In light of this information, we decided to make no recommendations to the agency regarding our findings. Further discussion of our findings follows.

VE POLICIES AND PROCEDURES MEET OMB CIRCULAR A-131'S CRITERIA

NRC has developed policies and procedures that generally meet the criteria detailed in Circular A-131. On July 14, 1994, NRC's Office of Administration (ADM) Director issued a memorandum to all NRC senior executives which describes NRC's process for both in-house personnel and contractor identification of programs and projects with the potential to yield VE savings. Specifically, the

memorandum established: (1) NRC's Competition Advocate² (CA) as the Designated Senior Management Official responsible for monitoring and coordinating agency VE efforts, (2) the criteria and guidelines for reviewing Advance Procurement Plans (APP) to identify potential VE study candidates, (3) the threshold to require review for the application of VE at \$1 million, and (4) a mechanism to waive requirements to conduct VE studies. The memorandum detailing NRC's VE procedures was provided to OMB along with the Fiscal Year 1994 annual report in April 1995.

VE IS NOT USED OR CONSIDERED AN APPROPRIATE TOOL FOR MOST NRC CONTRACTS

We found that although NRC has set up a process that largely meets the agency's obligations under Circular A-131, NRC generally has not applied VE techniques to its programs, projects, or contracts. Specifically, the agency has not identified any projects during its review of APPs that should be the subject of a VE study. Moreover, senior agency managers stated that VE is not applicable to most of NRC's contracts, which are generally to purchase "expertise" to assist NRC staff, rather than for a construction project or to "engineer" a product. Further, we found in a subjective sample of NRC contracts awarded in the last five fiscal years that NRC is not fully implementing Parts 48 and 52 of the FAR to include VE clauses in applicable contracts. These findings will be discussed in more detail in the rest of this section.

The ADM Director's July 1994 memorandum details the NRC process for reviewing APPs for potential VE studies. The CA should review APPs and identify potential candidates for a three member VE Review Team to consider. NRC's criteria states that VE is not normally applied to: (1) research and development, (2) engineering services from not-for-profit or nonprofit organizations, (3) contracts to provide for product or component improvement, and (4) commercial products that do not involve special requirements or specifications. These conditions generally mirror the exceptions listed in the FAR's guidance to contracting officers for when VE clauses should not be inserted into solicitations and contracts.

²Currently, NRC's Competition Advocate is the Director, Division of Contracts, ADM.

The CA told OIG that he reviews all APPs, but has identified no proposals in the past two fiscal years that were appropriate candidates for VE study. The VE Review Team has never convened to review a proposed procurement for a potential VE study. Also, Circular A-131 requires agencies to maintain files on their use of VE techniques, but according to the CA since no procurements have met the criteria for a VE study, NRC has not maintained specific VE files.

The CA and other senior agency managers stated their belief that VE is not applicable to most of NRC's contracts, which are generally to purchase "expertise" rather than for a construction project or to "engineer" a product. Also, a senior NRC manager stated his belief that NRC's process for evaluating opportunities and utilizing VE achieves what OMB wants agencies to accomplish. Further, a senior ADM staff person stated that NRC seeks to save money through negotiations during the contract solicitation.

Under FAR 48.201, NRC's contracting officers are to insert contracting clauses that encourage or require contractors to use VE techniques in solicitations and contracts when the contract amount is expected to be \$100,000 or more. VE contract clauses should not be inserted in contracts that: (1) meet any of the four exception criteria noted earlier, (2) are for personal services, or (3) have been exempted from VE requirements by the agency head. NRC contracting specialists use a scripted information system that assists in the preparation of contract documentation. This system asks the specialist whether a VE incentive clause should be included in a contract. Specifically, the specialist should determine whether an incentive clause, an incentive with a mandatory VE program clause, or no clause should be inserted in a contract.

NRC awarded 216 contracts from October 1, 1991, through September 4, 1996, valued at \$100,000 or more that were not interagency agreements or contracts to non-profit organizations for engineering services,³ including 62 contracts where the base award was worth more than \$1,000,000. OIG reviewed 25 of the 216 contracts, including 16 contracts worth more than \$1,000,000, that we subjectively determined were more likely to include VE clauses as required by Parts 48 and 52 of the FAR. We found that 4 from our sample of 25 contract files, or 16 percent, included a VE clause. Further, although Circular A-131 notes the applicability of

³Our review excluded interagency agreements, and grants and no-fee contracts to universities, since these contracts would usually be exempted from VE clauses under guidance in FAR 48.201.

VE to hardware and software projects, only 1 out of 15 information resources management contracts contained a VE clause. OIG asked a contracting manager to explain why seven seemingly appropriate contracts from our sample did not contain a VE clause. The manager said these contracts did not appear to meet any of the six FAR exceptions and that a VE clause should have been incorporated in the contract.

A senior ADM manager stated that ADM recognizes that the VE clause was omitted from some contracts that should have one. Further, the senior manager said ADM is reviewing its processes to correct the problem of omitting appropriate VE and other FAR clauses, and ADM is committed to ensuring that future appropriate contracts will contain VE clauses.

OMB PLANS TO REVISE CIRCULAR A-131

OIG also learned that OMB plans to revise Circular A-131 and possibly the FAR in the near future. An interagency group led by OMB will meet in early fall to begin work on revisions to encourage greater use of VE by Federal agencies. A senior OMB official told OIG that agencies are to achieve 90 percent of the cost and schedule goals for major and nonmajor acquisition programs, as instructed by Congress in the Federal Acquisition Streamlining Act of 1994, but have not been meeting this goal. The official believes that VE may help agencies meet the goal. The outcome of the interagency group review will provide an opportunity for OMB and NRC managers to revisit the applicability of VE to NRC programs, projects, and contracts.

CONCLUSIONS

The FARA and OMB Circular A-131 require Federal agencies to establish VE procedures and processes. We found that NRC has set up the policies and procedures to implement a VE process, but it has not applied VE techniques for analyzing agency programs and projects. Also, NRC senior managers believe VE's applicability to the types of contracts NRC awards is limited, and that NRC's VE process meets OMB's intent. Further, we found that although few of NRC's contracts valued at over \$100,000 awarded since October 1, 1991 included a VE

clause, senior ADM management is committed to ensuring that appropriate future contracts incorporate VE clauses.

However, planned OMB revisions to Circular A-131 and possibly the FAR may address NRC's concerns about the applicability of VE to its contracts and provide new incentives that encourage greater use of VE by NRC and other Federal agencies. Therefore, we are making no recommendations to the agency in this report.

OBJECTIVE, SCOPE AND METHODOLOGY

The Office of Management and Budget (OMB) issued Circular Number A-131, Value Engineering, on May 21, 1993, which requires Federal Departments and Agencies to use value engineering (VE) as a management tool to reduce program and acquisition costs. The Circular also requested Inspectors General to audit agency VE programs to: (1) validate the accuracy of agency reported VE savings, and (2) assess the adequacy of agency VE policies, procedures, and implementation of the Circular. The Nuclear Regulatory Commission (NRC), Office of the Inspector General conducted an audit that focused on assessing the adequacy of NRC's policies, procedures, and implementation of VE, since NRC reported no cost savings from VE for Fiscal Years 1994 and 1995.

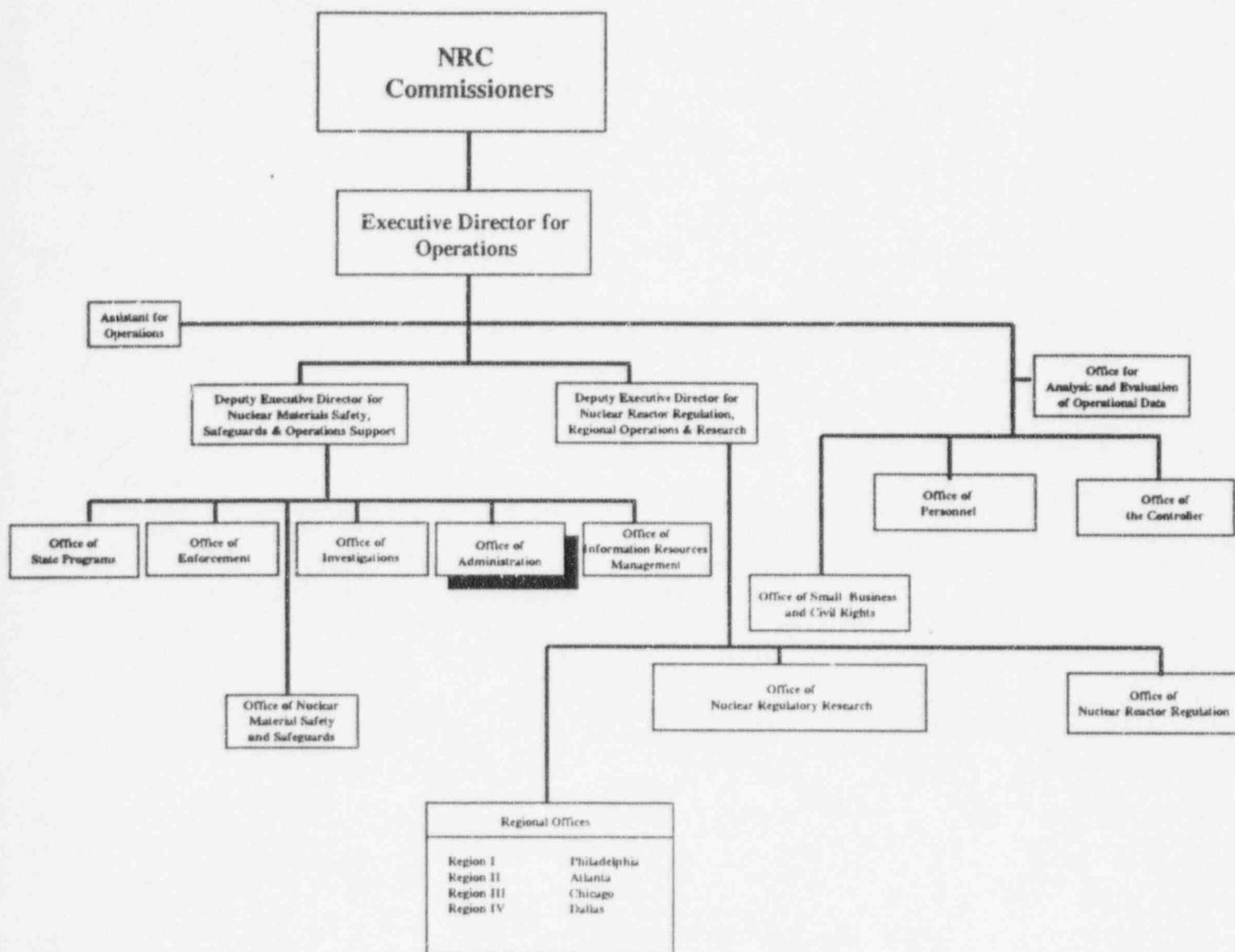
To conduct this audit, we interviewed senior management and staff from the Office of Administration (ADM) and senior management from the Offices of the Controller, Nuclear Reactor Research, Nuclear Reactor Regulation, and Nuclear Material Safety and Safeguards. We also consulted with an OMB Deputy Associate Administrator. Further, we reviewed ADM files for contracts awarded from October 1, 1991, through September 4, 1996, to determine whether VE clauses required by the Federal Acquisition Regulation are being incorporated.

To assess NRC policies, procedures, and implementation of VE, we evaluated NRC Management Directive 11.1 "NRC Acquisition of Supplies and Services," Office of Administration guidance and other supporting documents. To examine the Federal policy and legislative basis provided to VE, we reviewed OMB Circular Number A-131, the Federal Acquisition Reform Act of 1996, the Federal Acquisition Streamlining Act of 1994, and the U.S. Code of Federal Regulations Title 48. Finally, to gain an understanding of VE and its usefulness, we reviewed proceedings from the Society of American Value Engineers 1994 International Conference and U.S. Army Material Command Annual Reports on Value Engineering Accomplishments.

We reviewed the management controls for NRC's VE process. To assess the controls, we examined agency guidance and reports. Our findings are discussed in the report.

Our audit was performed in accordance with generally accepted Government auditing standards during the period of August through October 1996.

U.S. NRC FUNCTIONAL ORGANIZATION CHART



Areas Audited

MAJOR CONTRIBUTORS TO THIS REPORT

Corenthis B. Kelley
Team Leader

Scott W. Buchan
Senior Management Analyst

GLOSSARY: OFFICE OF THE INSPECTOR GENERAL PRODUCTS

INVESTIGATIVE

1. *INVESTIGATIVE REPORT - WHITE COVER*

An Investigative Report documents pertinent facts of a case and describes available evidence relevant to allegations against individuals, including aspects of an allegation not substantiated. Investigative reports do not recommend disciplinary action against individual employees. Investigative reports are sensitive documents and contain information subject to the Privacy Act restrictions. Reports are given to officials and managers who have a need to know in order to properly determine whether administrative action is warranted. The agency is expected to advise the OIG within 90 days of receiving the investigative report as to what disciplinary or other action has been taken in response to investigative report findings.

2. *EVENT INQUIRY - GREEN COVER*

The Event Inquiry is an investigative product that documents the examination of events or agency actions that do not focus specifically on individual misconduct. These reports identify institutional weaknesses that led to or allowed a problem to occur. The agency is requested to advise the OIG of managerial initiatives taken in response to issues identified in these reports but tracking its recommendations is not required.

3. *MANAGEMENT IMPLICATIONS REPORT (MIR) - MEMORANDUM*

MIRs provide a "ROOT CAUSE" analysis sufficient for managers to facilitate correction of problems and to avoid similar issues in the future. Agency tracking of recommendations is not required.

AUDIT

4. *AUDIT REPORT - BLUE COVER*

An Audit Report is the documentation of the review, recommendations, and findings resulting from an objective assessment of a program, function, or activity. Audits follow a defined procedure that allows for agency review and comment on draft audit reports. The audit results are also reported in the OIG's "Semiannual Report" to the Congress. Tracking of audit report recommendations and agency response is required.

5. *SPECIAL EVALUATION REPORT - BURGUNDY COVER*

A Special Evaluation Report documents the results of short-term, limited assessments. It provides an initial, quick response to a question or issue, and data to determine whether an in-depth independent audit should be planned. Agency tracking of recommendations is not required.

REGULATORY

6. *REGULATORY COMMENTARY - BROWN COVER*

Regulatory Commentary is the review of existing and proposed legislation, regulations, and policies so as to assist the agency in preventing and detecting fraud, waste, and abuse in programs and operations. Commentaries cite the IG Act as authority for the review, state the specific law, regulation or policy examined, pertinent background information considered and identifies OIG concerns, observations, and objections. Significant observations regarding action or inaction by the agency are reported in the OIG Semiannual Report to Congress. Each report indicates whether a response is required.