

GUIDE FOR CONDUCTING

VULNERABILITY ASSESSMENTS

June 1984

(Supersedes all previous editions)



Maritime Administration Guide for Conducting Vulnerability Assessments

TABLE OF CONTENTS

SECTI	<u>ion</u>	PAGE
1.	Purpose	1
2.	Introduction	1
3.	Vulnerability Assessment Process	3
4.	Plan for Subsequent Actions	4
Apper	ndix - Instructions for Completing Vulnerability Assessment Forms	

Guide for Conducting Vulnerability Assessments

Section 1. Purpose

This paper is issued pursuant to MAO 900-3, "Internal Control Systems," to provide guidance for assessing the vulnerability of MARAD programs and activities to waste, loss, unauthorized use, or misappropriation.

Section 2. Introduction

- 2.01 Strong systems of internal accounting and administrative control can help to prevent waste, loss, unauthorized use, or misappropriation in Federal Government operations. Internal control is the plan of organization and all of the methods used within a Federal agency to safeguard its resources, assure the accuracy and reliability of its information, assure adherence to applicable laws, regulations and policies, and promote operational economy and efficiency.
- 2.02 An internal control system is the totality of the organization, methods, and measures used to achieve internal control objectives. It is an integral part of the programs and functions performed by the agency and the systems used to operate these programs and functions. Thus, internal control is the responsibility of the same individuals responsible for operating the programs and functions.
- 2.03 In addition to the management and economic value of internal control, there are certain legal requirements that must be considered. These are 31 U.S.C. 3512, which requires the head of each Federal department and agency to establish and maintain adequate systems of accounting and internal controls, and OMB Circular No. A-123, "Internal Control Systems," which prescribes standards and policies for internal controls and directs each agency to review and update its internal control system on an ongoing basis. Also, the Federal Managers' Financial Integrity Act of 1982 (the Act) amends 31 U.S.C. 3512, requires the head of each agency to report to the President and the Congress annually on the status of his or her agency's system of internal control, and requires the General Accounting Office to prescribe standards for internal controls in the Federal Government. These standards apply to both financial management and program performance areas in the executive departments and agencies.
- 2.04 An efficient and effective way to approach the review and evaluation of internal control is comprised of seven phases:
 - 1. Organizing the process. This includes a determination as to the information and assurances to be provided to the agency head to enable the annual statement to be made to the President and the Congress; the assignment of responsibilities for planning, directing, and controlling the evaluation process throughout the agency; and the development of an information system that provides a tracking of the status of the evaluations and corrective actions as well as other pertinent information necessary to manage the overall process and facilitate preparation of the annual report.

- 2. Segmenting the agency into organizational components, and then identifying the programs and administrative functions conducted in each component. For example, the Maritime Administration can be segmented into the individual Associate Administrator's organizations and independent offices at headquarters in Washington, D.C., and the individual Region Offices and the U.S. Merchant Marine Academy in the field, etc. The Associate Administrator for Maritime Aids organization, in turn, could be segmented into the Office of Ship Financing, Office of Marine Insurance, etc.; or into administrative functions such as eligibility determination systems, benefit payment systems, quality control, etc. The outcome of this segmentation process is a list of assessable units and their respective internal control numbers.
- 3. Assessing the vulnerability to waste, loss, unauthorized use, or misappropriation of the funds, property, or other assets within each component and deciding which are the most vulnerable. This is done by identifying the factors that create an inherent riskiness in the assessable unit, considering the operating environment in which the assessable unit is performed, and preliminarily evaluating whether safeguards exist to prevent waste, loss, unauthorized use, or misappropriation from occurring.
- 4. Developing plans and schedules for the performance of internal control reviews and other actions, based on an evaluation of the results of the vulnerability assessments and other considerations (management priorities, resource constraints, etc.), and in such a manner as to provide that internal controls in those assessable units deemed to be the most vulnerable, as well as those deemed to be less vulnerable, are evaluated and improved as necessary to ensure a strong system of internal control.
- 5. Reviewing the internal controls for the selected assessable units, determining whether adequate control objectives have been established and control techniques exist and are functioning as intended, and then developing recommendations to correct weaknesses in either the design or functioning of the internal control system.
- 6. Determining, scheduling, and taking the necessary corrective actions for improving internal controls on a timely basis. Included in the determination should be an analysis to assure that the expected benefits to be obtained will outweigh the costs of any improvements made.
- 7. Preparing the annual statement to the Secretary of Transportation on the status of the agency's system of internal control, as required by DOT Order 5100.4A, Department of Transportation Internal Control Systems, and other applicable directives.

The above process is not an attempt to evaluate discretionary policy decisions. Rather, the evaluation process begins at the point at which a program or function has been authorized by the policy-level official having authority to do so, and focuses on the steps involved in the operation of the program. For example, the review of a program should not include an evaluation of whether the eligibility criteria are consistent with the statute and its legislative history. Instead, the review should evaluate whether the operation of the program is consistent with the criteria and

thus there is reasonable assurance that obligations and costs are in compliance with the applicable law; funds, property, and other assets are safeguarded; and revenues and expenditures are properly recorded.

Section 3. Vulnerability Assessment Process

- 3.01 A vulnerability assessment is a review of the susceptibility of an assessable unit to waste, loss, unauthorized use, or misappropriation. It is intended to determine the likelihood that situations exist in which:
 - obligations and costs are not in compliance with applicable law;
 - 2. funds, property, and other assets are not adequately safeguarded against waste, loss, unauthorized use, or misappropriation; and
 - 3. revenues and expenditures applicable to agency operations are not properly recorded and accounted for and therefore do not permit the preparation of accounts and reliable financial and statistical reports or the maintenance of accountability over assets.
- 3.02 Vulnerability assessments are the mechanisms with which an agency can determine the relative potentials for loss in its programs and functions; and then, after consideration of such relevant factors as management priorities, resources, etc., schedule internal control reviews and other actions accordingly. An in-depth review of existing controls is not appropriate at this stage.
- 3.03 The Maritime Administration has adopted a process developed by the Department of Education for carrying out the vulnerability assessment process. This process is used by 14 Federal agencies, is approved by the Office of Management and Budget and the General Accounting Office, and is strongly recommended by the Office of the Secretary of Transportation and the Inspector General. The procedure categorizes assessable units as either "program-" or "administrative-" type activities and uses a basic data sheet, an answer sheet, and a corresponding instruction booklet. In addition, problems or weaknesses requiring immediate corrective action may be noted during the performance of the vulnerability assessments. For instance, a program may be assessed in which the controls are perceived to be grossly inadequate and there is a strong possibility of loss if corrective action is not taken immediately. Such situations should be brought to the attention of the appropriate agency official as soon as possible in order that appropriate corrective actions can be taken. Each problem or weakness should be documented on Form DOT F 5100.1, "Corrective Action Record."
 - 1. The basic data sheet ("Internal Control Basic Data Sheet," Form MA-931) is used for each assessable unit to capture certain essential information for the vulnerability assessment.

4

2. There are two answer sheets:

Form MA-932, "Answer Sheet for Vulnerability Assessment of Administrative-Type Activities," and

Form MA-933, "Answer Sheet for Vulnerability Assessment of Program or Program-Type Activities."

3. There are two instruction booklets:

"Internal Control Vulnerability Assessment Instructions, Considerations, Questions, and Answers for Administrative-Type Assessable Units" which is used with answer sheet Form MA-932.

- "Internal Control Vulnerability Assessment Instructions, Considerations, Questions, and Answers for Program and Program-Type Assessable Units" which is used with answer sheet Form MA-933.
- 4. The "Corrective Action Record," Form DOT F 5100.1, is used for each assessable unit to document problems, weaknesses, deficiencies, etc., identified during the vulnerability assessment.
- 3.04 Copies of the forms and instruction booklets referenced in section 3.03 above are available from the Division of Management and Organization, Office of Management Services and Procurement.
- 3.05 Appendix 1 to this guide provides instructions for completing forms referenced in 3.03 above.
- 3.06 Completed vulnerability assessment documents outlined in 3.03 above are transmitted, over the signature of the applicable Associate Administrator or independent Office Director, to the Associate Administrator for Policy and Administration for summarizing and further processing.

Section 4. Plan for Subsequent Actions

- 4.01 To assist the Associate Administrator for Policy and Administration in determining the appropriate course of action, the Office of Management Services and Procurement will summarize the results of the vulnerability assessments in a frequency distribution based on percentile score.
- 4.02 The next step in the process is to use the summarized vulnerability assessments to determine appropriate subsequent actions. It is important at this point to remember that the overall objective of the internal control evaluation process is to bring about a strengthening of internal control systems in a cost-effective manner.
- 4.03 One approach may be to classify the vulnerability of each of the programs and administrative functions subject to these guidelines in such a way as to facilitate the establishment of a prioritized schedule for internal control reviews, e.g., highly vulnerable, requiring a detailed review of internal controls; moderately vulnerable, permitting less intensive and less frequent internal control reviews; low vulnerability, etc.

- 4.04 Another approach would be to consider a series of options for each of the program and administrative functions. This could be done by first evaluating the degree and causes of the vulnerabilities; then considering management priorities, resource availability, and other management initiatives underway; and finally determining the appropriate courses of action. These might consist of:
 - 1. Scheduling and conducting an internal control review.
 - 2. Requesting an audit.
 - 3. Establishing increased or improved monitoring procedures.
 - 4. Developing and conducting training programs for the staff.
 - Issuing clarifying instructions.
 - 6. Modifying procedures or documents.
- 4.05 The Associate Administrator for Policy and Administration will specify the need for and timing of internal control reviews based on the degree of vulnerability for the programs and functions assessed and the resources available to conduct the reviews. The information regarding scheduling should be maintained as part of the documentation.

GUIDE FOR CONDUCTING VULNERABILITY ASSESSMENTS Instructions for Completing Vulnerability Assessment Forms

A. Form MA-931, "Internal Control Basic Data Sheet":

- 1. Internal Control Number Control number assigned to the assessable unit for which the sheet is being prepared.
- 2. Assessable Unit Title Title of the assessable unit for which the sheet is being prepared.
- 3. Organizational Unit Title of the Office responsible for conducting the vulnerability assessment.
- 4. Assessor Name of the individual responsible for the vulnerability assessment.
- 5. Building, Room, Phone Building, room number, and telephone number of the assessor.
- 6. Date Date the vulnerability assessment was approved by the applicable Associate Administrator or independent Office Director.
- 7. Description of Activity Brief description of the assessable unit, i.e., the program/function covered by the vulnerability assessment. Must include, but is not limited to, the subelements identified by the Office of Management Services and Procurement.
- 8. Authorization Public laws, regulations (CFR title, section, etc.) and other issuances outside of DOT which authorize performance of the program/function covered by the assessment.
- 9. Activity Documentation List any DOT, MARAD, office directives, etc., issued to prescribe procedures, responsibilities, etc., of the program/function covered by the assessment.
- 10. Resources Assigned Enter the applicable prior and current fiscal year following "FY", e.g., if the fiscal year in which the assessment is being conducted is FY 84 then the prior fiscal year is FY 83.
 - (1) Enter the total dollars (in thousands) allocated to the program/ function being assessed, including the prorated portion of assigned personnel salaries (do not include personnel benefits, etc.).
 - (2) Enter the number of full-time equivalent (FTE) personnel assigned to the program/function for each category, i.e., permanent, temporary, detailed to the activity, and other than those specified.
- 11. ADP Self-explanatory.
- 12. Oversight List the title of each audit, study, evaluation, etc., of the program/function performed within the last two years. Source refers to the performing organization, e.g., General Accounting Office, DOT Inspector General, etc. Date is the date of the audit, study, evaluation, etc.

- B. Forms MA-932 and MA-933, "Answer Sheet for Vulnerability Assessment of Administrative-Type Activities," and "Answer Sheet for Vulnerability Assessment of Program or Program-Type Activities," respectively:
 - Enter the same assessable unit title, internal control number (IC #), assessor's name, organization title, telephone number, and date as were entered on the related Form MA-931, "Internal Control Basic Data Sheet."
 - 2. Using the applicable instruction booklet, i.e., for program- or administrative-type assessable units, answer each of the 25 multiple-choice questions and record the selected "score" on the answer sheet following the instructions on the inside of the front page of the booklet. The selected answer blocks may be completely filled in, circled, or an "X" entered therein to denote the selection.
- C. Form DOT F 5100.1, "Corrective Action Record":
 - 1. Program Name Enter the same assessable unit title as entered on the related Form MA-931, "Internal Control Basic Data Sheet."
 - 2. Event Cycle Leave blank.
 - 3. Nature of Weakness Briefly describe the problem, deficiency, etc.
 - 4. Date Management was Notified of Weakness Date the official responsible for the program/function on which the problem/deficiency impacts was notified of the problem/deficiency.
 - 5. Corrective Action Proposed Briefly describe the action proposed to correct the problem/deficiency.
 - 6. Anticipated Correction Date Future date by which the responsible official expects to have the corrective action completed. Leave blank if the action has already been completed.
 - Actual Correction Date If the corrective action has been completed, enter the date actually completed.

Prepared by - Enter the name of the assessor as reflected on the related Form MA-931, "Internal Control Basic Data Sheet."

Routing Symbol - Assessor's mail routing symbol, e.g., MAR-310, MRG-6100, MMA-5100, etc.



INTERNAL CONTROL BASIC DATA SHEET

INTERNAL CONTROL NUM	BER: AS	SESSABLE UNIT TIT	'LE	
ORGANIZATIONAL UNIT:		ASSESSO)R:	
BLDG:,	ROOM:,	PHONE:	DATE:	
DESCRIPTION OF ACTIV	ITY:			
AUTHORIZATION:				DATE
PUBLIC LAW REGULATION OTHER				
ACTIVITY DOCUMENTATI ATTACH A LIST OF				1-
RESOURCES ASSIGNED: DOLLARS (000's) PERSONNEL:	- V	FY ··	FY	
PERMANENT STAF Temporary Staf Detailee Staff Other Staff Ye	F YEARS Years			
ADP - LIST THE NAME(S) OF THE AUTOMA	ATED SYSTEM(S) THE	IS ACTIVITY USE	:s:
OVERSIGHT - LIST ALL WITHIN TO	REVIEWS, STUDIE HE LAST TWO YEAR		DITS OF THIS A	CTIVITY
TITLE		•	SOURCE	DATE



AN IR SHEET FOR VULNERABILITY ASSET OF ADMINISTRATIVE-TYPE ACTIVITIES

Organizat		issesso: Date				
OUESTION	SUBJECT	. _{MA}		SCORE		_
1	RESPONSIBILITIES OF PERSONNEL INVOLVED	<u>NA</u>	<u></u>	2 3		<u>5</u>
2.	WRITTEN PROCEDURES AND INSTRUCTIONS		u		,	П
3.	INSTRUMENTS UTILIZED IN THE PROCESS/SYSTEM		П		_	
4.	INTERACTION ACROSS ORGANIZATIONS		_			
5.	SENSITIVITY BY ENTITIES EXTERNAL TO THE DEPARTMENT		П		_	
6.	APPRECIATION FOR EFFECTIVE INTERNAL CONTROLS				•	
7.	ASSUMED EFFECTIVENESS OF EXISTING CONTROLS		_			П
8.	THE INTERVAL SINCE THE MOST RECENT EVALUATION OR AUDIT	•				
9.	RECENT INSTANCES OF ERRORS OR IRREGULARITIES					
10.	STATUS OF AUTHORIZING LEGISLATION	П	П			П
11.	SCOPE OF WRITTEN AUTHORITY					П
12.	TYPE OF ADMINISTRATION					П
13.	ADMINISTRATIVE RESOURCES - STAFF					
14.	ADMINISTRATIVE RESOURCES - SAE DOLLARS					П
15	OPERATIONAL COVERAGE BY WRITTEN PROCEDURES					П
16.	POTENTIAL FOR CONFLICTS OF INTEREST					
17.	ADEQUACY OF CHECKS AND BALANCES	-[]				
18.	PERSONNEL CONSIDERATIONS		П			П
19.	ADEQUACY OF REPORTS (Particularly Financial Reports)					
20.	ADP CONSIDERATIONS	П				
21.	EMPLOYEE STANDARDS					П
22.	BUDGETARY AND ORGANIZATION GOALS					П
23.	TIME CONSTRAINTS					
24.	CLASSIFIED OR SENSITIVE MATERIAL					П
25.	COSTS VERSUS BENEFITS OF EXISTING CONTROL SYSTEM					
MA-932)	Assessor Program Manager	(Signa		<u> </u>		



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ANSWER SHEET FOR VULNERABILITY ASSESSMENT OF PROGRAM OR PROGRAM-TYPE ACTIVITIES

OUESTION	SUBJECT		•	SCORE!	•	
- UUESTION	3080261	MA -		2 3		-
1.	NEWNESS OF PROGRAM		П			
2.	FUNDING LEYEL					
3.	NATURE OF THE PROGRAM					
4.	RECENT CHANGES IN RESOURCE LEVELS				П	
5.	IMPACT OR SENSITIVITY OF THE PROGRAM ON PERSONS OR ORGANIZATIONS EXTERNAL TO THE DEPARTMENT			П		
6.	APPRECIATION FOR EFFECTIVE INTERNAL CONTROLS	Ź		П		
7.	ASSUMED EFFECTIVENESS OF EXISTING CONTROLS					
8.	THE INTERVAL SINCE THE MOST RECENT EVALUATION OR AUDIT	•	П			
9.	RECENT INSTANCES OF ERRORS OR IRREGULARITIES					
10.	STATUS OF AUTHORIZING LEGISLATION					
11.	SCOPE OF WRITTEN AUTHORITY					
12.	TYPE OF ADMINISTRATION					
13.	ADMINISTRATIVE RESOURCES - STAFF					
14.	ADMINISTRATIVE RESOURCES - S&E DOLLARS			П		
15	OPERATIONAL COVERAGE BY WRITTEN PROCEDURES					
16.	POTENTIAL FOR CONFLICTS OF INTEREST					
17.	ADEQUACY OF CHECKS AND BALANCES					
18.	PERSONNEL CONSIDERATIONS					
19.	ADEQUACY OF REPORTS (Particularly Financial Reports)					
20.	ADP CONSIDERATIONS					
21.	EMPLOYEE STANDARDS					
22.	BUDGETARY AND ORGANIZATION GOALS		П	П		
23.	TIME CONSTRAINTS					
24.	CLASSIFIED OR SENSITIVE MATERIAL		1			
25.	COSTS VERSUS BENEFITS OF EXISTING CONTROL SYSTEM		П	П		