Year One
Technical
Progress Report

April, 1979

NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product or process disclosed or represents that its use would not infringe privately owned rights.

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency Thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

✓
DEVELOPMENT OF A MANAGEMENT SYSTEM
FOR IMPLEMENTING THE NEPA PROCESS
IN THE DEPARTMENT OF ENERGY

Technical Progress Report
for Period March 1, 1978 - February 28, 1979

Robert G. Rolan, et al.

DALTON•DALTON•NEWPORT
Cleveland, Ohio 44122

April, 1979

Prepared For

The Assistant Secretary for Environment
UNITED STATES DEPARTMENT OF ENERGY
UNDER CONTRACT NO. EP-78-C-02-4750

NEPA MANAGEMENT SYSTEM
PROJECT STAFF AND OTHER CONTRIBUTORS

Robert R. Werner, PhD
Project Director

Robert G. Rolan, PhD
Project Manager

Maria R. Eigerman
Deputy Project Manager

<u>Team A</u>	<u>Team B</u>	<u>Team C</u>
Lance Mezga, Team Leader Mario Busacca Elnora Clink Deborah Calevich Diane Sigler	Barbara Sibley, Team Leader Kathryn Wertheim Mark Ramsdell Lauren Seymour	Mark Mine, Team Leader Cathleen McGhee Brian Gleisser Diane Sigler

Other Contributors

Jeffrey Homans
Susan Kauer

Thomas Webb, PhD
James Wright

Support Staff

<u>Administrative Support</u>	<u>Word Processors</u>	<u>Editors</u>
Joy Davis	Janice Pengal Sylvia Breth Almeda Hood Eileen Zern	Gail Gimbel Joanne Gibson Robertta Hubbard Patricia Toth Barbara Perris
<u>Graphic Artists</u>	<u>Printers</u>	<u>Library</u>
Joseph Sabol Frederick Edwards Howard Hancock William Wiggins	Kenneth Woodworth Charles Lyons Eduardo Qadir	Elizabeth Rowland Carole Wertheim

ABSTRACT

DOE's numerous difficulties in responding to the National Environmental Policy Act have sometimes resulted in costly program delays. The Assistant Secretary for Environment commissioned this three-year project to develop a comprehensive approach to managing NEPA compliance agency-wide. The first year's effort resulted in the conceptual design described in this report.

The approach used in the NEPA Management System (NMS) project included:

- Analysis of DOE's basic functions to achieve its mission and their associated environmental requirements
- Analysis of existing DOE mechanisms for meeting these environmental requirements
- Development of potential approaches for improving the Department's response to NEPA.

The issues and potential solutions presented are based on review and analysis of scores of DOE management guidance documents and interviews with hundreds of DOE personnel, both at headquarters and in the field. A six-part Conceptual Framework of the NMS was developed to organize the analysis and present its conclusions.

Potentially responsive approaches to improve DOE's NEPA response include:

- Early consideration of the environment in Departmental policy making and regulations development
- Early, detailed planning for NEPA document preparation and review
- Integration of NEPA compliance activities with DOE procurement processes
- Institution of post-EIS mitigation and monitoring procedures
- Development of comprehensive guidance for all aspects of NEPA compliance.

Conceptual approaches to solving each of these problems are presented as a basis for more detailed work in the second year.

D A L T O N . D A L T O N . N E W P O R T

ARCHITECTS ENGINEERS PLANNERS 3605 WARRENSVILLE CENTER ROAD CLEVELAND OHIO 44122 216/283-4000

April 24, 1979

Mr. Francis A. Leone
Division of NEPA Affairs
U.S. Department of Energy
Mail Station E-201
Germantown, Maryland 20767

Subject: Contract No. EP-78-C-02-4750

Dear Mr. Leone:

Dalton-Dalton-Newport is pleased to submit its Year One Technical Progress Report, "Development of a Management System for Implementing the NEPA Process in the Department of Energy."

The document is somewhat longer than was originally contemplated, but as the work of synthesizing Year One efforts progressed, the number of significant points seemed to multiply. In addition, the separation of our Year Two funds into FY 79 and FY 80 segments argued for a fuller treatment of findings now. To facilitate your review, we have attempted to capture the essence of the report in the Executive Summary.

The material dealing with NEPA documentation (Chapter IV, E) will probably be at once the most familiar to reviewers and the most controversial. Our charge was to examine and evaluate the existing DOE NEPA response system because it was admittedly imperfect: the attention of the ASEV and DOE principals was often directed at NEPA matters more "urgent" than "important." In analyzing the causes of this and other problems and in identifying potential solutions, there is always the risk of giving offense. Certainly, none is intended, and we have attempted to present our findings as objectively as possible.

This report is supplemented by two additional papers that add depth in their respective areas of analysis. We have provided a Summary for the Mod I series, "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act." The six parts of that analysis have been of value not only to EV in conjunction with revision of procurement regulations and other guidance documents, but also to us in addressing policy and program planning as a component of the NMS. Indeed, the analysis of the NEPA interface with DOE's key policy development and program management systems proved to be so important that it became the subject of a second paper--"Factoring Environmental Considerations into DOE Policy and Program Decision-Making: An Analysis of Office of Environment Opportunities and Options."

D A L T O N . D A L T O N . N E W P O R T

Mr. Francis A. Leone
April 24, 1979
Page Two

Our work with you and other members of EV in developing concepts and options for what is becoming your NEPA Management System has been stimulating. We look forward to continuing a satisfying relationship in the ensuing years.

Very truly yours,

DALTON • DALTON • NEWPORT

Robert R. Werner
Vice President
Project Director

RRW:jep
Enclosures

TABLE OF CONTENTS

	<u>Page</u>
I. EXECUTIVE SUMMARY	
A. OBJECTIVES	I-1
B. APPROACH	I-2
C. CONCEPTUAL FRAMEWORK	I-4
D. PRINCIPAL FINDINGS	I-5
E. YEAR TWO EFFORTS	I-12
II. INTRODUCTION	
A. PROJECT BACKGROUND	II-1
B. OBJECTIVES OF THE YEAR ONE REPORT	II-1
C. YEAR ONE APPROACH	II-2
D. LIMITATIONS OF ANALYSIS	II-5
E. STATUS OF THE NMS PROJECT	II-5
III. OVERVIEW OF YEAR ONE ACCOMPLISHMENTS	
A. INTERVIEWING IN THE FIELD AND AT HEADQUARTERS	III-1
B. INVENTORY AND GENERIC ANALYSIS OF DOE PROGRAMS AND ACTIVITIES	III-3
C. ANALYSIS OF DOE GUIDANCE DOCUMENTS FOR RESPONSIVENESS TO NEPA	III-5
D. WORKING PAPERS	III-8
E. DISCUSSION PAPERS	III-8
F. SPECIAL ASSIGNMENTS	III-9
IV. CONCEPTUAL FRAMEWORK OF THE NEPA MANAGEMENT SYSTEM	
A. INTRODUCTION	IV-1
B. FUNCTIONAL OVERVIEW OF THE NEPA MANAGEMENT SYSTEM	IV-2

	<u>Page</u>
1. Objectives of the Functional Overview	IV-2
2. System-wide Framework Criteria	IV-2
3. The Six Parts of the NEPA Management System Conceptual Framework	IV-4
C. BASIC FUNCTIONS OF DOE AND THEIR ENVIRONMENTAL REQUIREMENTS	IV-9
1. Policy Development	IV-9
2. Program/Project Planning	IV-15
3. Program/Project Implementation and Evaluation	IV-27
D. ENVIRONMENTAL PLANNING PART OF THE NEPA MANAGEMENT SYSTEM	IV-36
1. Requirements of the Environmental Planning Part	IV-36
2. Existing Mechanisms for Meeting Environmental Requirements	IV-41
3. Unsatisfied Environmental Planning Requirements and Potentially Responsive Approaches	IV-50
4. Summary of Mechanisms for Meeting Environmental Requirements	IV-65
E. ENVIRONMENTAL COMPLIANCE DOCUMENTATION PART OF THE NEPA MANAGEMENT SYSTEM	IV-68
1. Requirements of the Environmental Compliance Documentation Part	IV-68
2. Existing Mechanisms for Meeting Environmental Requirements	IV-77
3. Unsatisfied Environmental Documentation Requirements and Potentially Responsive Approaches	IV-82
4. Summary of Mechanisms for Meeting Environmental Compliance Documentation Requirements	IV-99
F. PROGRAM/PROJECT ENVIRONMENTAL IMPLEMENTATION AND EVALUATION PART OF THE NEPA MANAGEMENT SYSTEM	IV-110
1. Requirements of the Program/Project Environmental Implementation and Evaluation Part	IV-110
2. Existing Mechanisms for Meeting Environmental Requirements	IV-120

	<u>Page</u>
3. Unsatisfied Environmental Implementation and Evaluation Requirements and Potentially Responsive Approaches	IV-124
4. Summary of Mechanisms for Meeting Program/Project Environmental Implementation and Evaluation Requirements	IV-128
G. INTEGRATION OF PARTS IN THE CONCEPTUAL FRAMEWORK	IV-133
1. Basic DOE Functions	IV-133
2. NEPA-related Functions	IV-135
3. Conclusion	IV-140
V. LOGISTICAL CONSIDERATIONS FOR IMPLEMENTATION OF THE NEPA MANAGEMENT SYSTEM	
A. NEPA GUIDANCE DOCUMENTS	V-1
B. DECENTRALIZATION CONCEPTS	V-6
C. TRAINING	V-8
D. MANPOWER REQUIREMENTS	V-9
VI. OBJECTIVES FOR YEAR TWO	
A. NEPA COMPLIANCE DOCUMENTATION PROCESS	VI-1
1. Analysis of Existing Guidance and Regulations	VI-1
2. Participation in Guidance and Regulations Development	VI-2
3. Assistance in Training and Orientation	VI-2
4. Other Efforts	VI-2
B. INVENTORY AND GENERIC ANALYSIS OF DOE PROGRAMS AND ACTIVITIES	VI-3
1. Completion of First Iteration	VI-3
2. Report of Findings	VI-4
C. NEPA AND POLICY/PROGRAM PLANNING	VI-4
1. Examination of Policy Determinations and Program Guidance	VI-5
2. Analysis of Relationship of NEPA to Other EV Functions	VI-5
3. Performance of Case Studies	VI-5

D. SUMMARY

APPENDICES

- A. INITIAL CRITERIA OF ENVIRONMENTAL EFFECTS AND CATEGORIZATION OF DOE PROGRAMS AND ACTIVITIES
- B. THE NEPA MANAGEMENT SYSTEM AND THE PROCUREMENT PROCESS

LIST OF TABLES

<u>Table No.</u>		<u>Page</u>
IV-1	Summary of Principal Environmental Planning Documents for the DOE NEPA Management System	IV-67
IV-2	NEPA Responsibility/Organizational Role Matrix	IV-97
IV-3	Summary of Principal Environmental Compliance Documents for the DOE NEPA Management System	IV-100-104
V-1	Characteristics of DOE's NEPA Guidance	V-2

LIST OF FIGURES

<u>Figure No.</u>		<u>Page</u>
<u>CHAPTER I</u>		
I-1	NEPA Management System Project	I-3
I-2	NEPA Management System Conceptual Framework	I-6
I-3	Generalized Year Two Work Plan	I-13
<u>CHAPTER II</u>		
II-1	NEPA Management System Project Flow Chart	II-3
<u>CHAPTER III</u>		
	(None)	
<u>CHAPTER IV</u>		
IV-1	The Six Parts of the NEPA Management System Conceptual Framework	IV-6
IV-2	Policy Development Part of the NMS Conceptual Framework	IV-10
IV-3	Program/Project Planning Part of the NMS Conceptual Framework	IV-17
IV-4	Major System Acquisitions - Phase Transition Decision Points	IV-19
IV-5	Summary of Procedures for the Development and Analysis of New Regulations, Standards and Guidelines	IV-21
IV-6	DOE Directives Development System	IV-22
IV-7	Generalized DOE Budget Process	IV-24

<u>Figure No.</u>		<u>Page</u>
IV-8	Program/Project Implementation and Evaluation Part of the NMS Con- ceptual Framework	IV-28
IV-9	DOE Procurement Process Involving a Source Evaluation Board	IV-30
IV-10	Procedures for the Republication and Review of Existing Regulations	IV-34
IV-11	Environmental Planning Part of the NMS Conceptual Framework	IV-40
IV-12	Relationship of the DOE Environ- mental Planning System to the Major Energy System Acquisition Process	IV-44
IV-13	A Typical Hierarchy of Policy, Programs, and Projects in DOE Technology RD&D	IV-61
IV-14	Overview of Environmental Planning Mechanisms	IV-66
IV-15	Environmental Compliance Docu- mentation Part of the NMS Con- ceptual Framework	IV-76
IV-16	Sequence of NEPA Compliance Documents for Administrative Actions	IV-106
IV-17	Principal Variations in the NEPA Compliance Documentation Process as a Function of Action Type	IV-107
IV-18	Program/Project Environmental Implementation and Evaluation Part of the NMS Conceptual Framework	IV-119
IV-19a	Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Project Management System	IV-129
IV-19b	Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Procurements > \$5 Million	IV-130

<u>Figure No.</u>		<u>Page</u>
IV-19c	Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Site Selection, Acquisition and Development	IV-131
IV-19d	Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Design, Construction, Operations	IV-132
IV-20	NEPA Management System Con- ceptual Framework	IV-134

CHAPTER V

V-1	Summary of the Family of DOE NEPA Compliance Guidance Docu- ments and Principal Considera- tions in Their Development	V-3
-----	--	-----

CHAPTER VI

(None)

APPENDICES

A-1	Relationships Between Initial Criteria for Natural Systems and Socioeconomic Systems	A-4
A-2	DOE Program and Activity Cate- gorization Matrix	A-5
B-1	Department of Energy Procurement Instruments and Associated Processes	B-8
B-2	Review and Approval of Support Service Procurement Requirements	B-16
B-3	Integrated Procurement Management Information System (IPMIS) - for Procurement & Financial Assistance Actions over \$10,000	B-19

I. Executive Summary

I. EXECUTIVE SUMMARY

A. OBJECTIVES

In carrying out its mission, the Department of Energy is responsible for complying with both the broad policy goals and the procedural requirements of the National Environmental Policy Act (NEPA). The departmental unit charged with overseeing DOE conformance with NEPA and related environmental protection statutes is the Office of Environment (EV), whose Assistant Secretary (ASEV) establishes policies and procedures to assure that environmental considerations demonstrably influence agency decision processes at the policy, program, and project levels. In support of ASEV's mission, the NEPA Affairs Division in the Office of Environment commissioned Dalton•Dalton•Newport in March, 1978, to develop and test a comprehensive NEPA Management System (NMS) which would integrate NEPA policy requirements and the production of NEPA documents with basic DOE functions and activities. To the extent that this objective was achievable in the context of the Department's formative state, the NMS design was to simplify and regularize NEPA activities agency-wide and thereby permit ASEV and the NEPA Affairs Division (NAD/EV) to concentrate on the supervision of system function and specialized problem-solving. As a related management objective, the NMS was to clarify the NEPA-related roles of units within EV and the nature of their interactions with other elements of the Department.

As a three-year effort, the development of the NEPA Management System is evolutionary. Since it is intended to complement the programmatic and management operation of the Department, it must remain flexible enough to accommodate the dynamics of change within the agency and, at the same time, provide a rationale for steady progress toward an institutionalized process for responding fully and efficiently to NEPA requirements. Therefore, the seven major task areas defined in the Scope of Work are being addressed iteratively, first at a general level, and then at progressively more detailed levels. As each iteration is completed, the NMS design grows more refined and the findings and conclusions presented for the ASEV's consideration become more specific. Throughout, the work has been conducted with the fullest possible participation of Department personnel at every level to assure that the NMS, even in its preliminary form, is immediately useful in the conduct of DOE's NEPA business.

This report documents the progress made during the first project year and presents findings on the NEPA Management

System design in terms of a six-part framework for its future development. These findings are offered with respect to the Department's basic functions and the concomitant types of environmental work they require under the provisions of the NEPA statute. In addition, the report treats key logistical considerations related to system implementation and provides an overview of work to be accomplished in the second project year.

B. APPROACH

The basic questions addressed by the NMS project are presented in Figure I-1. Because they define an investigation of extensive scope, the columns to the right specify the major tasks performed in the first year and indicate their respective outputs.

Construction of the inventory of DOE activities was fundamental to the project. This initial work provided not only an understanding of how the agency operates, but also a universe of DOE actions to be analyzed for their potential NEPA significance. Next, a generic analysis was performed to distinguish between NEPA-applicable and non-applicable types of actions. This activity required a categorization scheme to cluster similar DOE actions across agency units and criteria to determine the potential for significant environmental impact inherent in those actions. The product is a series of Inventory and Generic Analysis modules which identify the NEPA-sensitive programs and activities of the various Secretarial Offices in the Department. Programs and activities determined to be exempt from NEPA because they have no potential for generating significant effect are retired from further consideration.

The next major phase of work concerned agency procedures for handling actions which, by virtue of their potential impactfulness, require formal environmental review. The thrust of this procedural analysis was to develop a cohesive approach for ensuring compliance with NEPA's requirements for both environmental consideration in decision making and for the preparation of documents (EIs, EAs, etc.) which serve as evidence of such consideration. Because DOE's problems with NEPA compliance had most often manifested themselves in the documentation area, improved response to Section 102(2)(C) was a matter of first priority. However, the investigation was also sensitive to environmental requirements which appear much earlier in the action-planning process, i.e., NEPA interfaces with policy development and program/project planning. Therefore, the analysis necessarily extended to

Figure I-1 NEPA Management System Project

Departmental decision making in general, with policy formulation and program planning as a particular emphasis.*

The task of relating the full range of DOE functions to NEPA-related functions proved to be more complex than anticipated. First, because programs and procedures varied widely across DOE's predecessor agencies, data collection involved not only the review and analysis of scores of DOE management and program documents, but also hundreds of interviews with DOE headquarters and field personnel. Second, long delays in organizing some elements of the Department, complicated by the protracted congressional debate over the Administration's proposed energy legislation, made certain program information initially unobtainable. Finally, in late November, 1978, the Council on Environmental Quality issued new and more rigorous NEPA compliance requirements that had to be factored into the analysis. These complexities notwithstanding, the logic behind the approach was straightforward:

- Identify those programs and activities which are NEPA-sensitive;
- Determine how such programs are shaped, planned, and implemented; and
- Relate activities along that continuum to NEPA requirements.

The mechanism for integrating the mass of information developed on agency activities and NEPA-mandated environmental review has been termed the Conceptual Framework, of which the NEPA Management System forms a part. As a synthesis of work performed in the first project year, this tool permits orderly consideration of all agency activities and their environmental components, whether a NEPA document is ultimately required or not.

C. CONCEPTUAL FRAMEWORK

The Conceptual Framework describes the interrelationships among basic DOE functions and NEPA-driven functions. As

*For a detailed analysis of the NEPA interface with DOE's key policy development and program management systems, see "Factoring Environmental Considerations into DOE Policy and Program Decision-Making: An Analysis of Office of Environment Opportunities and Options," Dalton•Dalton•Newport, April, 1979.

presented in Figure I-2, the Framework has six parts. The parts to the left aggregate the agency's energy mission activities into three basic functional areas:

- Policy Development
- Program/Project Planning
- Program/Project Implementation and Evaluation

The parts to the right, the NEPA Management System proper, aggregate the Department's environmental mission activities into three other functional areas:

- Environmental Planning
- Environmental Compliance Documentation
- Program/Project Environmental Implementation and Evaluation

To ascertain the appropriate connections among the six parts, each underwent a similar analysis:

- Definition of functional requirements: what must be achieved to accomplish the function.
- Identification of existing mechanisms for performing the function and analysis of their adequacy with respect to NEPA requirements: how and how well NEPA is being addressed.
- Identification of any unsatisfied NEPA requirements and consideration of viable approaches responsive to them: what options for improved NEPA performance should be considered.

Chapter IV-C presents the results of this analysis for basic DOE functions. Sections D, E, and F of Chapter IV treat the analogous results for the agency's NEPA functions.

D. PRINCIPAL FINDINGS

The analysis revealed strengths and weaknesses in all six parts. Many of the weaknesses are attributable to the immaturity of the Department's fundamental management systems. Overall, the area of poorest performance is early environmental planning, that is, the incomplete or delayed consideration of the environmental issues inherent in a proposed policy, program, or project action. Failures here inevitably compound problems with document production downstream.

Figure I-2 NEPA Management System Conceptual Framework

Basic DOE Functions

DOE NEPA-Related Functions

In some types of activity there is little or no discernible early environmental planning, e.g., regulations development and the preparation of policy guidance. In others there is evidence of substantial progress, most notably in the area of technology RD&D where the Environmental Readiness Document/Environmental Development Plan/Project Environmental Plan (ERD/EDP/PEP) process seems to be functioning effectively.

Findings specific to the three parts of the NEPA Management System are summarized below. Approaches to satisfying the needs identified are offered to the ASEV for consideration in terms of their urgency, resource requirements, difficulty of implementation, and their potential impact on other elements of the Department.

Environmental Planning Needs

- Explicit consideration of environmental factors in the development of policy guidance.
Responsive approaches:
 - Increase EV participation in Strategy Paper development.
 - Increase EV participation in the development of National Energy Plan initiatives.
 - Increase EV representation on policy-oriented Task Forces.
- Consistent review of DOE legislative initiatives.
Responsive approaches:
 - Increase coordination with key legislative offices.
 - Review all proposed National Energy Plan legislative initiatives.
 - Expand monitoring of the Action Coordination and Tracking System.
- Active involvement in the development of DOE regulations.
Responsive approaches:
 - Establish formal liaison with regulatory offices.

- Develop an environmental planning analog to the ERD/EDP/PEP system for regulatory programs.
 - Monitor the DOE Regulatory Calendar.
- Increased EV participation in the development of internal DOE documents.
Responsive approaches:
 - Consult with the Directorate of Administration (AD) to identify ways to assist AD and other DOE elements in developing environmentally sound directives.
 - Develop criteria to assist AD and DOE in determining those kinds of directives for which EV should provide formal concurrence.
 - Develop an internal system in EV to assure both substantive and administrative review and coordination.
- Expansion of EV's current, effective involvement in the energy technology RD&D planning process.
Responsive approaches:
 - Initiate environmental review for technologies below the major system threshold.
 - Initiate environmental review of projects in Phases 1-3 of the Program and Project Management System, with emphasis on the direct impacts of research rather than on the impacts of future applications of the research.
 - Initiate program office involvement in the preparation of Project Environmental Plans.
- Correction of uneven levels of compliance in NEPA documentation.
Responsive approaches:
 - Use Initial Criteria of Environmental Effects and action categorization scheme in developing agency-wide NEPA guidance.

- Prepare NEPA guidance tailored to identifiable program types, as needed.

Environmental Compliance Documentation Needs

- More accurate specification of document type and scheduling in document planning.
Responsive approaches:
 - Combine the CEQ Scoping Process for EISs with DOE's EIS Implementation Plan concept. The resulting plan would be a "contract" between the program office and EV.
 - Extend the Implementation Plan concept, in simplified form, to Environmental Assessments.
- Improved draft document preparation.
Responsive approaches:
 - Provide improved guidance with respect to standards for NEPA document quality, including both form/style and the substantive analysis of issues, and methods for achieving these standards.
 - Provide improved guidance on obtaining and independently verifying environmental data from contract or grant proposers, applicants for other DOE financial assistance, and applicants for permits, licenses, or other regulatory decisions.
 - Provide improved guidance on how the program offices can more readily identify and contract with a variety of highly qualified NEPA support contractors.
- Improved document review process.
Responsive approaches:
 - Develop an EIS Review Plan, concurrent with the EIS Implementation Plan. This document should schedule and plan document review and identify potential bottlenecks, conflicts of interests, or other problems in the review process and eliminate them well in advance of draft document submission.

- Define more clearly the roles and responsibilities of NAD and other EV personnel in the document review process.
 - Improve generic and specific guidance to in-house NEPA document reviewers.
 - Provide better procedures for informing author program offices of needed changes in draft NEPA documents.
 - Improve feedback to document reviewers about the effect of their comments on revision instructions issued to author program offices.
 - Develop an improved system for tracking the status of NEPA documents in preparation or review.
 - Protect the integrity of EV's NEPA document review role by restricting EV's document preparation responsibilities to its own programmatic activities and by assuring that these documents are critically reviewed by other appropriate Secretarial Offices.
- Improved translation of NEPA document findings into program/project implementation.
Responsive approaches:
 - Develop, concurrent with final EIS preparation, a detailed plan for mitigating and monitoring potential environmental impacts. Use such plans to scope requirements for procurements or other means of project implementation.
 - Develop guidance for preparation of the Records of Decision required by CEQ to include a program office commitment to the activities described in its plan for mitigation and monitoring.

Program/Project Environmental Implementation and Evaluation Needs

- Integration of environment, health, and safety requirements into procurement and contract activities.
Responsive approaches:

- Develop a management plan with respect to major system acquisitions: general NEPA guidance and contract-specific environmental requirements.
 - Address the environmental requirements of other types of procurement activity.
- Preparation of guidance for mitigation and monitoring implementation in non-nuclear technologies and for non-effluent-related impacts.
 - Use of environmental, health, and safety research results in DOE policy and program planning.
 - Use of EIS data to identify environmental, health, and safety research needs.

Linkages among the three major parts of the NEPA Management System are not yet well-developed. For example, the environmental planning process has been only moderately successful in predicting the type and timing of required NEPA documents. The most encouraging progress has been made in the environmental review of technology programs, but, even there, the ERD/EDP/PEP system cannot be expected to provide the detailed planning required to produce a specific document for a particular program milestone. In another important area, when mitigation and monitoring measures have been incorporated into an EIS, they have not been translated effectively into project performance factors in the implementation stage. While the Department has recognized a continuing obligation in terms of environment, safety, and health for non-nuclear projects, there are few effective means to assure that its responsibilities are being properly discharged. Further, routine systems to feed the results of those mitigation and monitoring efforts implemented back into the planning of new NEPA documents and their impact forecasts do not exist. More importantly still, perhaps, the feedback loops from health and environmental research to environmental planning and document preparation are still largely under-developed.

Similarly, linkages between the NMS and basic DOE mission activities are weak. As previously noted, Departmental policy making is not significantly influenced by either the

issue identification or document forecasting elements of environmental planning. This is due more to the absence or incomplete development of formal policy formulation systems through which EV might provide input than it is to any lack of analytic capability in EV. However, even in the area of program and project development, where some formal planning mechanisms do exist, the environmental component does not adequately influence plan definition. Adequate budgets for NEPA document preparation, the development of environmental control technology, and other mitigation/monitoring activities are often overlooked or slighted. Further, the preparation and review of NEPA documents have not yet been well-coordinated with the procurement processes used to implement proposed actions.

E. YEAR TWO EFFORTS

The major work units presented as column headings in Figure I-3, Generalized Year Two Work Plan, describe activities that will continue into Year Two. The collective outputs of tasks within each unit will satisfy contractual requirements for the further refinement, implementation, and evaluation of the NEPA Management System. Once review and comment by EV on the findings presented in this report become available, priorities will be established for the sequence of tasks to be performed and for the intensity of effort to be applied.

The iterative nature of the Scope of Work requires Year Two work in three areas. First, the Inventory and Generic Analysis (I/GA) series for Secretarial Offices and field elements will be completed and updated as necessary. As the principal data base for the project, the I/GA is fundamental to tasks in each of the other two areas. When it is complete and reflects the organizational and programmatic changes which have occurred since the fall of 1978, a Summary Report will be prepared. This document will include a compilation of NEPA-sensitivity findings on individual agency elements and provide methodological recommendations for any subsequent I/GA iterations. Most importantly, the summary will contain a prioritized list of DOE program offices which require additional attention and EV assistance. This list can serve as the basis for an EV action plan to work with individual Secretarial Offices on improving NEPA responsiveness and the efficiency of document flow.

Since the findings from Year One have produced the greatest number of options in the documentation part of the NMS, the second area, continued analysis of NEPA documentation, will likely receive major emphasis. Tasks will include further

Figure I-3 Generalized Year Two Work Plan

() Notations in parentheses reference tasks in the Scope of Work

DALTON • DALTON • NEWPORT
February, 1979

development of proposed procedures which EV determines will better link environmental planning functions like determination of document need to actual document preparation and review. Further, Year One work on NEPA guidance materials for the agency as a whole and for particular program types can be translated into specific recommendations on the content and dissemination of new guidance. Orientation needs identified to date may be translated into training materials which would improve the NEPA performance of DOE units and produce system-wide efficiencies in document management. Finally, work in this area would include the identification of opportunities for pilot efforts to implement any Year One document system approaches selected for testing by the ASEV.

The third work unit will continue to explore the interface between NEPA requirements and DOE policy/program planning. The thrust of this effort will be to maximize the impacts of environmental review, and NEPA documents particularly, on higher-level Departmental decision making. One task will focus on key decision points and may include retrospective case analyses of significant technology or regulatory program decision processes. Another task will treat the influence of the NEPA mission on the internal programming of EV. That is, the existing and potential interrelationships between EV's NEPA functions and its other missions will be identified and examined. The goal of this analysis will be to identify opportunities for: 1) NEPA process contributions to strengthening environmental control technology R&D, health research, etc., and 2) other program contributions to strengthening EV's NEPA process activities.

Outputs from all three major work units will further refine the preliminary NMS design presented in this report. To the extent that EV wishes to move ahead with implementation of any particular approaches proposed, Year Two activities will include EV support and the design of testing and evaluation procedures to measure incremental improvements in NEPA system functions.

II. Introduction

II. INTRODUCTION

A. PROJECT BACKGROUND

As established by Section 203 of the Department of Energy Organization Act and by DOE Order 5440.1, "Implementation of NEPA," the Assistant Secretary for Environment (ASEV) is responsible for establishing the policies and procedures whereby departmental conformance with the National Environmental Policy Act and other environmental statutes will be achieved. To support this mission and to strengthen the ASEV's oversight capability, the Office of Environment (EV) commissioned this project in March, 1978. Its purpose is to develop and test a comprehensive NEPA Management System (NMS) which will integrate the functions of the entire Department with the policy goals and documentation requirements of the Act.

The most basic problems to be overcome through the NMS design lay in three areas. First, the agency was experiencing recurrent difficulties with the NEPA documentation required by Section 102(2)(C): 1) inadequate treatment or non-recognition of environmental issues and impacts, 2) excessive costs in time and dollars to prepare, review, revise, and issue documents; 3) a high degree of vulnerability to litigation; and 4) program delays and/or stoppages occasioned by poor document scheduling. Second, the management systems of the Department were largely unformed or insufficiently sensitive to environmental considerations; EV was unable to obtain information on or input environmental information to policy and program decisions in a routine and timely manner. Third, the Department lacked a system for post-EIS follow-through; there was no assurance that mitigation measures and monitoring requirements specified in NEPA documents were, in fact, being carried out, or that the results of such activities were influencing new project or new document development.

The three-year NEPA Management System project was conceived to remedy these problems in a systems context. Its principal objective is to relate the NEPA functions of the Department so intimately to its basic operations that DOE's environmental mission and its energy mission will be merged into a synergistic whole.

B. OBJECTIVES OF THE YEAR ONE REPORT

The objective of this report is to indicate the progress made during the first year toward meeting DOE's and EV's

environmental compliance needs. This report provides an overview of the year's effort, a rationale for the approach taken, and a summary of our findings in terms of a six-part framework for future development of the NMS. The logistics for implementing the DOE NEPA Management System are also given preliminary consideration, and objectives for the second year of the NEPA Management System Project are identified.

C. YEAR ONE APPROACH

Figure II-1 depicts the process used to develop the NEPA Management System. The Year One strategy was to first develop a baseline of information about DOE's programs, the agency's planning and management systems, and the environmental requirements which must be satisfied to comply with NEPA. Once the information gathering was well under way, the focus shifted to understanding the relationships among the Department's various functions and to developing improved approaches to NEPA compliance.

This effort began with an overview of the range of programs and activities conducted by DOE and a review of the NEPA statute and the body of NEPA case law. This information was used to develop the Initial Criteria of Environmental Effects, which identify the kinds of environmental impacts which may result from any type of DOE action.

Following intensive interviewing in the program and staff offices of DOE, these criteria were used to help develop a preliminary categorization of the Department's programs and activities and then to facilitate their being sorted into NEPA-exempt and NEPA non-exempt groups. This Generic Analysis served to narrow the universe of actions considered in NEPA system design; NEPA-exempt actions were retired from further consideration because they are generally unlikely to cause environmental impacts and, therefore, do not require further review for environmental implications. Actions in the NEPA non-exempt group were identified by Secretarial Office because they generally do require environmental review, including, in some cases, the development of an environmental impact statement.

The NMS project also examined DOE's current system for producing NEPA documentation in the context of both the requirements of the new Council on Environmental Quality (CEQ) regulations on NEPA and suggestions received from various program and field offices during intensive interviewing. The needs identified and various approaches for improving the documentation process are presented in Chapter IV.E. of this report.

Figure II-1 NEPA Management System Project Flow Chart

An examination directed toward more effective involvement of environmental considerations in DOE policy making and planning was another major aspect of the project. The project team analyzed 37 DOE guidance documents (primarily DOE Orders) and recommended appropriate wording changes to promote environmental sensitivity in the basic management processes of the agency.* These documents are briefly described in Chapter III.C. of this report. This effort led to the development of ideas for process modifications in program/project planning and management to facilitate effective NEPA compliance. These findings are incorporated in the conceptual design of the NMS presented in Chapter IV. The other major effort in this area was an analysis of EV/NEPA interfaces with DOE's decision making processes. The results are presented in a draft working paper, "Factoring Environmental Considerations into DOE Policy and Program Decision-Making: An Analysis of Office of Environment Opportunities and Options," published in April, 1979. The findings of this paper have significantly influenced the NMS conceptual design, because the goals of NEPA require better decisions, not just better NEPA documents.

In addition to the above, the first year's efforts resulted in other working papers, discussion papers, and other less formal submissions, which are briefly described in Chapter III of this report. Efforts in all these areas contributed to the conceptual design of the NMS.

The principal achievement of project Year One is the Conceptual Framework for the NMS, presented in Chapter IV. This design synthesizes various approaches for increasing the consideration of environmental issues in DOE policy making and planning, for improving NEPA compliance documentation, and for systematically implementing environmental protection measures and evaluating their effectiveness. Year Two efforts involve detailed development of the mechanics of this system, limited implementation, and preliminary evaluation and refinement, as the ASEV may direct. Objectives for Year Two are discussed in Chapter VI.

*See "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Parts I-VI, September, 1978-February, 1979.

D. LIMITATIONS OF ANALYSIS

DOE was created in October, 1977, by the fusion of three entire major predecessor agencies and parts of several others. Because of continuing reorganization and program redefinition, some of the Department's most fundamental management systems are still under development. The evolutionary nature of DOE's operations was complicated further by the fact that two of the principal predecessor agencies, ERDA and FEA, were themselves relatively new at the time of DOE activation and were still working out the details of their own management systems. Moreover, throughout 1978, DOE's reorganization and program definition were inhibited by the protracted process of enacting energy legislation stemming from the Department's National Energy Act proposals. In addition, uncertainty over the exact nature of CEQ's new regulations on the implementation of NEPA, which were not issued until November 29, 1978, caused further confusion.

All of these factors made the task of integrating NEPA-driven activities with other Departmental functions extremely complex; all components of the system remained in a constant state of flux. As a result, the NMS Conceptual Framework is more developed in some areas than in others. Nevertheless, while the institutional immaturity of DOE presents problems, it also presents a unique opportunity to develop a NEPA Management System coordinated with the evolution of the rest of DOE's management systems.

E. STATUS OF THE NMS PROJECT

All elements of the NMS project scope of work, except those having to do with system implementation and testing, were treated to some degree in the first year. At the direction of the Acting Assistant Secretary, work was begun in several NEPA problem areas concurrently. Thus, many of the tasks addressed in Year One at a general level will be more specifically treated in Year Two. This iterative approach to task performance will permit EV to make immediate use of findings across a broad range of NEPA-related issues and still set priorities for system refinements as circumstances warrant.

Submissions on virtually every NMS work element were produced in Year One. A major work element yet to be completed is the "Inventory and Generic Analysis of DOE Programs and Activities," which is being published in modules tailored to each major headquarters or field organization. About half the modules on headquarters Secretarial Offices are complete or well-advanced, but require updating to reflect organizational or programmatic changes made since the fall of 1978.

The interviews which form the basis for these program analyses are about 80 percent complete for both the remaining headquarters units and field offices. The first full iteration of the Inventory and Generic Analysis is scheduled for completion by early fall of 1979.

The Conceptual Framework for the NMS was completed in Year One and is presented in this report. Pending review and comment from EV, the principal effort in Year Two will be to advance components of the system into detailed design and pilot implementation.

III. Overview of Year One Accomplishments

III. OVERVIEW OF YEAR ONE ACCOMPLISHMENTS

The development of the Conceptual Framework for the NEPA Management System (Chapter IV) represents the major accomplishment of the first project year. This Framework, which will serve as the basis for subsequent refinement of the NMS, synthesizes information developed through five major types of activity:

- Interviewing in the field and at headquarters
- Preparation of the Inventory and Generic Analysis of DOE Programs and Activities
- Analysis of DOE Guidance Documents for Responsiveness to NEPA
- Preparation of working papers
- Preparation of discussion papers
- Special assignments.

A. INTERVIEWING IN THE FIELD AND AT HEADQUARTERS

Extensive interviewing at DOE field offices and facilities and headquarters offices comprised a large part of the Year One effort. In addition to providing information for the Inventory and Generic Analysis, these interviews aided the project team in developing an understanding of DOE planning and management procedures and identifying problems with NEPA implementation and opportunities for improvement. A series of draft Inventory and Generic Analysis modules covering the field are scheduled for production by autumn, 1979. Interviewing in the field to date has involved:

Six of eight Operations Offices:

- Albuquerque
- Chicago
- Idaho
- Las Vegas
- Richland

- San Francisco

Eight of ten Regional Representatives Offices:

- Region I (Boston)
- Region II (New York)
- Region III (Philadelphia)
- Region V (Chicago)
- Region VI (Dallas)
- Region VIII (Denver)
- Region IX (San Francisco)
- Region X (Seattle)

Four of five Power Marketing Administrations:

- Alaska
- Bonneville
- Southwestern
- Western Area

Four of five Energy Technology Centers:

- Bartlesville
- Laramie
- Morgantown
- Pittsburgh

Two of three National Laboratories:

- Argonne
- Brookhaven

Two of three Project Offices:

- Fast Flux Test Facility Project Office
- Grand Junction Office, National Uranium Resource Evaluation

Eleven other facilities primarily or solely concerned with atomic energy and/or defense programs:

- Hanford Engineering Development Laboratory
- Hanford Production Operations
- Idaho Chemical Processing Plant
- Idaho National Engineering Laboratory
- Lawrence Livermore Laboratory
- Los Alamos Scientific Laboratory
- Nevada Test Site
- Pacific Northwest Laboratory
- Rocky Flats Plant
- Sandia Laboratories (Albuquerque and Livermore)

Six other facilities:

- Dallas Energy Information Field Office
- Environmental Measurements Laboratory
- Fort Worth FERC Office
- Naval Petroleum Reserve Office
- Pittsburgh Mining Research Center
- Stanford Linear Accelerator

Interviewing at headquarters has been completed in all the Secretarial Offices except for the Offices of Energy Technology, Economic Regulatory Administration, and Environment, where more work is needed owing to recent reorganization and/or program redefinition.

B. INVENTORY AND GENERIC ANALYSIS OF DOE PROGRAMS AND ACTIVITIES

The Inventory and Generic Analysis of DOE Programs and Activities is designed to:

- Determine the universe of programs and activities being conducted by the various organizational

units of the Department of Energy, without attempting to provide a comprehensive catalogue of DOE projects;

- Identify which of DOE's programs and activities have the potential for producing environmental impacts;
- Specify which organizational units are responsible under NEPA and related laws for programs and activities which may significantly affect the environment;
- Recommend for categorical exclusion from NEPA review responsibility those programs and activities which have no potential impacts and those organizational units which have no direct responsibility for actions which can influence the nature, intensity, or occurrence of environmental impacts;
- Identify the types of environmental impacts likely to be associated with the programs and activities of NEPA-responsible units, without attempting to provide detailed assessments of the environmental impacts which may be caused by any given DOE program or activity;
- Describe the current NEPA-response activities of NEPA-responsible units sufficiently to enable the Office of Environment (EV) to define its priorities for improving NEPA compliance and overview;
- Identify DOE organizational units which are potential NEPA control points; and
- In general, serve as a prime information base for the remaining activities in the development of the DOE NEPA Management System.

The Inventory and Generic Analysis was organized by Secretarial Office and is being produced in modular form. In addition to methodological and overview materials, four draft modules were produced in the first year:

- Office of Resource Applications
- Office of Conservation and Solar Applications (partial, due to incomplete reorganization)
- Office of Energy Technology (partial, due to incomplete reorganization)
- Directorate of Procurement and Contracts Management

Draft modules on the remaining Secretarial Offices are scheduled to be produced by autumn, 1979. Limited interviewing at headquarters is required to complete this work.

C. ANALYSIS OF DOE GUIDANCE DOCUMENTS FOR RESPONSIVENESS TO NEPA

At the request of EV, Dalton•Dalton•Newport analyzed more than 37 internal directives which describe DOE's planning, management, and operating policies, procedures, and responsibilities. Such documents include DOE Orders and Interim Management Directives (IMDs), regulations, handbooks, and manuals. This effort recommended wording changes in these documents to facilitate the timely inclusion of appropriate environmental considerations in the fundamental activities of the agency. The work produced as a result of this modification to the contract (Mod I) has also played an invaluable part in developing the understanding of DOE planning and management processes needed to develop an effective and efficient NEPA Management System.

Other documents not included in Mod I were also thoroughly analyzed to support the design of the NMS. These documents, as well as those included in Mod I (indicated by an asterisk), are listed below.

Planning and Budget Development:

- Department of Energy Policy and Program Planning System (IMD 0203)*
- Establishment of the Interim DOE Program Management Review and Control System (PMRC) (IMD 0202)*
- Designation of Department of Energy (DOE) Major Systems (Order 4240.1)*
- Major System Acquisitions (Order 5700.1)*
- Program and Project Management System*
- Budget Policy and Practices Handbook (ERDA Manual 1301)*
- Department of Energy Budget Reporting and Classification (IMD 1105)*
- Department of Energy Interim Allotment and Financial Plan Control System (IMD 1102)*

- Department of Energy Program Budget Structure (IMD 1302)*
- Department of Energy Field Work Package Proposal and Authorization System (FWPPAS) (Draft Order 5700.____)*

Policy Coordination

- Department of Energy Action Coordination and Tracking System (ACTS) (IMD 0504)*
- Preparation of Internal Departmental Documents for Submittal to the Office of the Secretary of Energy Principals (IMD 0505)*
- Monitoring, Coordinating and Transmitting Reports to Congress (IMD 0508)*
- Department of Energy Directives System (Order 1321.1)*
- Energy and Management Information Systems Review, Coordination and Integration (Order 1330.1)*
- Administration of Policy Coordination Instruments with Governmental Agencies (Order 5031.1)*
- Procedures for the Development and Analysis of Regulations, Standards and Guidelines (Draft Order 2030.____)*
- Implementation of the National Environmental Policy Act (Order 5440.1)
- Department of Energy Environmental Issues Committee (Draft Order _____)
- Department of Energy Environmental Development Plans (Order 5420.1)
- Field and Laboratory Coordination Council (Order 1130.1)
- Management Procedures for Loan Guaranty Programs (Order 4650.1)

Procurement Processes

- Department of Energy Assistance Regulations (10 CFR 600)*

- Department of Energy Procurement Management Assistance Review Program (Draft Order 4210.____)*
- Reviewing and Screening of Proposed Procurements for Small Business/Minority Business/Labor Surplus (SB/MB/LS) Participation (IMD 0705)*
- Business Strategy Groups (IMD 0708)*
- Designation of Source Selection Officials (IMD 0706)*
- Source Evaluation Board Handbook (ERHQ-0013)*
- Solicitation Review Panel (IMD 0707)*
- Numbering Systems for Procurement and Financial Assistance Actions and Documents (IMD 0703)*
- Review and Approval of Support Services Procurement Requirements (Order 1370.1)*
- Integrated Procurement Management Information System (IPMIS) Detailed Design Report (DOE/PR-0009/D)*
- A Guide to Preparation of DOE Procurement and Financial Assistance Request Forms*
- A Guide to Reporting Progress on DOE Procurement and Financial Assistance Requests in Progress*

Construction and Facilities Management

- Facilities General Design Criteria (ERDA Appendix 6301)*
- Management of Construction Projects (AEC 6101)*
- Site Selection (Draft Order _____)*
- Site Development and Facilities Utilization Planning (Draft Order _____)*
- Administration of the Department of Energy Weapon Program and Weapon Complex (IMD 6001)*
- Real Estate Management (Draft Order _____)
- Project Management in the Department of Energy (Draft Order _____)

- Department of Energy Environment, Safety, and Health Program (Draft Order 5400.____)
- Environment, Safety and Health Appraisal Program (Draft Order 5482.____)
- Safety Analysis and Review System for DOE Operations (Draft Order 5481.1)
- Uniform and Independent Safety Review System (UISRS) (Action Memorandum)

Miscellaneous

- Standard Subject Classification (Order 0000.1)*
- Department of Energy (DOE) Organization Manual (Order 1100.1)*
- Federal Register Management (Order 1900.1)
- Physical Protection of Special Nuclear Material (IMD 6103)

D. WORKING PAPERS

Formal working papers were prepared to analyze and present recommendations to EV on topics directly related to the design of the NEPA Management System. Three working papers were submitted in Year One:

- Issues and Options Related to EV's Participation in DOE's Response to Section 102(2)(C) of NEPA (5/78)
- Initial Criteria of Environmental Effects (8/78)
- Factoring Environmental Considerations into DOE Policy and Program Decision-Making: An Analysis of Office of Environment Opportunities and Options (4/79)

E. DISCUSSION PAPERS

Ten informal discussion papers were produced in Year One at the request of the Office of Environment (EV) to present initial ideas for discussion and NEPA-related information and analyses needed on short notice:

- Analysis of NEPA-related Laws and Regulations (6/78)
- Comparative Analysis of 10 CFR 1021, IMD 5101, and the Draft CEQ Regulations on NEPA (6/78)
- What Should EV's Role be in Policy Making and How Can that Role be Implemented? (6/78)
- Issues and Problems Facing ONA (7/78)
- ONA/DNA Organization and Functions Analysis (7/78, 8/78, 9/78)
- Evaluation of Issues Regarding the NEPA Documentation Process in DOE (8/78)
- Principles Established by Significant NEPA Case Law (11/78)
- Summary of Major Findings from the Field (11/78)
- CEQ Regulations Workbook (1/79)
- How Other Federal Agencies Make the Determination Whether an EIS is Needed (1/79)

F. SPECIAL ASSIGNMENTS

EV also requested several short-term special assignments in Year One. These resulted in the following:

- Program Office/Requirements Matrix (wall chart and supporting paper) (8/78)
- Considerations on the reorganization of the NEPA Affairs Division (NAD)
- Flow charts integrating NEPA compliance with the procurement process for the "Management Plan for Integrating Environment, Health and Safety into Procurement and Contract Activities" (2/79)
- Assistance to the NEPA Affairs Division in developing its draft regulations and procedures to implement the CEQ regulations on NEPA.

IV. Conceptual Framework of the NEPA Management System

**A. Introduction to the
Conceptual Framework**

IV. CONCEPTUAL FRAMEWORK OF THE NEPA MANAGEMENT SYSTEM

A. INTRODUCTION TO THE CONCEPTUAL FRAMEWORK

The Conceptual Framework for the NEPA Management System (NMS) provides a structure and orientation for analyzing the basic functions of DOE in terms of their environmental planning, compliance, and evaluation requirements. The goal of this chapter is to describe the components of the Conceptual Framework and their interrelationships.

Section B of this chapter presents an overview of the parts and functions of the NMS. Its purpose is to provide a general understanding of the rationale underlying the six-part Conceptual Framework.

Section C briefly describes the basic functions of DOE and their environmental requirements to establish the context within which the NMS has been designed to function. These discussions include an identification and description of DOE's major policy, planning, and program/project implementation systems.

Sections D, E, and F present detailed descriptions of the functions of the environmental planning, environmental compliance documentation, and program/project environmental implementation and evaluation parts of the NMS, respectively. These sections also describe existing and potential approaches/mechanisms for meeting the environmental requirements identified in Section C.

Finally, Section G discusses the integration of all six parts of the Conceptual Framework. This section emphasizes the relationship of the NMS to DOE's current management systems.

**B. Functional Overview of the
NEPA Management System**

	<u>Page No.</u>
B. FUNCTIONAL OVERVIEW OF THE NEPA MANAGEMENT SYSTEM	IV-2
1. Objectives of the Functional Overview	IV-2
2. System-wide Framework Criteria	IV-2
3. The Six Parts of the NEPA Management System Conceptual Framework	IV-4
a. Basic Functions of the Department of Energy	IV-5
b. NEPA-related Functions of the Department of Energy	IV-5
c. Relationships Among the Parts	IV-8

B. FUNCTIONAL OVERVIEW OF THE NEPA MANAGEMENT SYSTEM

B.1. Objectives of the Functional Overview

The Department of Energy requires a comprehensive system to deal with the highly complex interrelationships among its basic functions and the environmental requirements imposed by the National Environmental Policy Act. This section presents the basic rationale for and approach to the development of such a system, the NEPA Management System, or NMS. The product of the effort to integrate DOE activities and NEPA requirements is a six-part Conceptual Framework which presents the interrelationships which are fundamental to an adequate Departmental NEPA response. This section addresses the system-wide framework criteria used to condition the design and introduces the Conceptual Framework. Components of the Framework are discussed in detail in subsequent sections.

B.2. System-wide Framework Criteria

The design of any effective system to more routinely factor environmental concerns into the conduct of the Department's business rests on two fundamental considerations:

- Full response to both the procedural and policy mandates of the National Environmental Policy Act, and
- Appreciation of the current or reasonably foreseeable administrative, management, and operating capabilities of the agency as design opportunities and constraints.

To make these considerations useful at an operational level, two groups of normative criteria were developed for conditioning system design, i.e., testing ideas in terms of their potential for producing desirable system characteristics.

The first group of system-wide criteria addresses satisfying the requirements of NEPA. To assure the Department of Energy's compliance with this act, the NEPA Management System is designed to:

- Regularize timely and effective preparation and review of NEPA documents.
- Assure appropriate and explicit environmental consideration in all stages of decision making and planning throughout the Department, while maintaining a reasonable compromise between NEPA compliance requirements and the need to move programs expeditiously.

- Assure preparation of adequate NEPA documents by providing a system which considers the requirements for content, review and coordination, public involvement, and logistics early in the planning process.
- Minimize the repetitious and sometimes contradictory discussion of policy or program issues in project-level EISs by resorting to document tiering.
- Preserve and enhance the independence and integrity of the NEPA document review process, both internally and with respect to the public.
- Develop an approach to post-EIS follow-through that assures: 1) that actions are being implemented in an environmentally acceptable manner, 2) that the Department has discharged any continuing environmental responsibilities, and 3) that valuable empirical information is fed back into policy and program planning.

The second group of criteria addresses system performance characteristics related to departmental capabilities. To be immediately useful to the Department of Energy in general and the Office of Environment (EV) in particular, the NEPA Management System is designed to:

- Rest on the present authorities of the ASEV, primarily those set forth in Section 203 of the DOE Organization Act of 1977 and in DOE Order 5440.1, "Implementation of NEPA."
- Focus EV's attention on those DOE management procedures or systems which most effectively control or influence DOE's decision processes. Such procedures or systems should have one or more of the following characteristics. They should:
 - provide a mechanism for EV to communicate, advise, or provide a service to another Secretarial or Field Office.
 - enable EV to involve itself in high-priority DOE or national issues which will gain the attention of the OSE Principals, Congress, and other key actors in the policy- and decision-making processes.
 - provide a means for EV to identify potential environmentally sensitive actions taking place in other Secretarial Offices early

enough to assure that the environment is considered in decision making and that required environmental documents are prepared and reviewed in advance of a decision.

- provide EV with an opportunity to educate others, both within and outside DOE, about the potential environmental impacts of agency actions and their related environmental compliance requirements.
- provide EV with opportunities to improve its influence and usefulness within DOE by more effectively providing environmental planning services and information, by participating in decisions with environmental implications, and by taking the initiative on high-priority issues.
- provide a formal means for EV to enforce its position through concurrence, approval, or similar forms of action when necessary.

In addition, the NMS is designed to:

- Recognize and use those existing DOE management processes now undergoing revision, make informed assumptions about the fundamental nature of these changes, and be flexible enough to accommodate a degree of uncertainty regarding ultimate process function.
- Recognize the diversity of function and related NEPA needs across units of the agency, both at headquarters and in the field, and accommodate that diversity by providing tailored procedures for treating the individual characteristics of each program, as well as more general department-wide procedures.
- Be compatible with the current financial and manpower constraints of the Office of Environment and other Secretarial Offices, recognizing, however, that serious under-compliance with NEPA in some offices fully justifies the application of more resources to this function.

B.3. The Six Parts of the NEPA Management System Conceptual Framework

The Conceptual Framework for the NEPA Management System has six parts. Three parts describe the functions of DOE in

terms of the management systems used to develop and implement DOE's policies, programs, and projects; the other three parts describe the functions required to plan and implement DOE's environmental activities. These latter three parts are the NMS proper. However, because the NMS was conceived from the outset as becoming integral to DOE's existing procedures, all six together comprise the Conceptual Framework. The six parts of the NMS Conceptual Framework are presented by title in Figure IV-1. The functions included in each of these parts are defined below, keyed to the box numbers on the figure. Detailed discussion of these functions and approaches/mechanisms for their implementation and integration follow in subsequent sections of this chapter.

B.3.a. Basic Functions of the Department of Energy:

- Policy Development Part (Box 1): DOE forecasts energy supply and demand, develops strategies, and establishes priorities for technical and regulatory alternatives which can influence supply and demand. This process results in legislative proposals to Congress and in policy and fiscal guidance to the program and support offices of the agency. (See Section C.1 of this chapter for a detailed discussion.)
- Program/Project Planning Part (Box 2): DOE develops its internal management procedures; plans and coordinates its technical and regulatory approaches to implementing agency policy; and formulates budget requests to support these programs and projects. (See Section C.2.)
- Program/Project Implementation and Evaluation Part (Box 3): This group of functions describes the day-to-day conduct of DOE's programs and projects: project management, procurement, site selection and development, facility design/construction/operation, regulatory actions and adjudication, rate setting, and program evaluation. (See Section C.3.)

B.3.b. NEPA-related Functions of the Department of Energy: The three parts of the Conceptual Framework introduced below comprise the NEPA Management System proper. Responsibility for performing these activities is shared by the program and staff offices of the Department, with overview by the Office of Environment. Respective responsibilities are outlined here and discussed in more detail in later sections of this chapter.

Figure IV-1 The Six Parts of the NEPA Management System Conceptual Framework

Dalton · Dalton · Newport
April, 1979

- Environmental Planning Part (Box 4): DOE performs two major environmental planning activities:
 - Identification and assessment of the environmental implications of the various policy and program/project planning alternatives available to DOE decision makers. This includes planning and scheduling for environmental control technology RD&D and for environment, safety, and health research related to technological and regulatory approaches to energy supply and conservation.
 - Identification of NEPA compliance documentation needed for DOE policy, program, or project proposals and scheduling and planning to meet these requirements.

For more details see Section D of this chapter.

- Environmental Compliance Documentation Part (Box 5): Program and support offices make detailed plans for and prepare documents required by NEPA (such as EAs and EISs). The Office of Environment guides the preparation of such documents and subsequently reviews and approves them. (See Section E.)
- Program/Project Environmental Implementation and Evaluation Part (Box 6): The program and support offices (particularly in the field) assure the safe and environmentally acceptable design, construction, and operation of DOE facilities and various other environmentally significant projects. Environmental control technology RD&D and other environmental research relevant to the development of technologies also takes place.

The Office of Environment provides independent oversight of the above program and support office functions; funds and manages the bulk of DOE's environment, safety, and health research; manages the decontamination and decommissioning of excess DOE radioactively contaminated facilities and sites, uranium mill tailing sites, etc.; and manages the DOE traffic control program for nuclear materials other than weapons components and strategic nuclear materials.

Other functions in this part include the feedback of environmental, health, and safety monitoring

and research data and program evaluations to the project management, program/project planning, environmental planning, compliance documentation, and policy development functions. (See Section F.)

B.3.c. Relationships Among the Parts: As noted, in practice the three parts of the NEPA Management System are not separable from DOE's basic functions. The products of the NMS functions generally feed into the other DOE management systems in the form of information designed to aid DOE decision makers in developing policies and plans and in managing programs and projects. The integration of all six elements of the Conceptual Framework is discussed in detail in Section G of this chapter.

C. Basic Functions of DOE and Their Environmental Requirements

	<u>Page No.</u>
C. BASIC FUNCTIONS OF DOE AND THEIR ENVIRONMENTAL REQUIREMENTS	IV-9
1. Policy Development	IV-9
a. Functions of the Policy Development Process	IV-9
b. Elements of the Policy Development Process	IV-11
(1) Annual Policy Discussions	
(2) Policy Guidance	
(3) Fiscal Guidance	
(4) National Energy Plan	
(5) Legislative Initiatives	
c. Overview of Environmental Requirements	IV-12
(1) Policy Planning	
(a) Identification and Evaluation of Alternatives	
(b) Sensitivity to Environmental Issues	
(c) Identification of Need for and Type of NEPA Compliance Documentation	
(2) Policy Documentation	
(3) Policy Implementation and Evaluation	
2. Program/Project Planning	IV-15
a. Functions of the Program/Project Planning Process	IV-15
b. Elements of the Program/Project Planning Process	IV-16
(1) Program and Project Management System and Major System Acquisitions	
(2) Regulations Development	
(3) Directives Development	
(4) Budget Formulation	
(5) International Agreements	
(6) Memoranda of Understanding	
c. Overview of Environmental Requirements	IV-26
(1) Program/Project Planning	
(2) Program/Project Documentation	
(3) Program/Project Implementation and Evaluation	
3. Program/Project Implementation and Evaluation	IV-27
a. Functions of Program/Project Implementation and Evaluation	IV-27
b. Elements of Program/Project Implementation and Evaluation	IV-27
(1) Project Management Development	
(2) Procurement Processes	
(3) Site Selection, Acquisition, and Development Processes	
(4) Design and Construction Management Processes	
(5) Evaluation of Programs, Projects, and Regulations	
(6) Adjudication Procedures	
c. Overview of Environmental Requirements	IV-35
(1) Implementation/Evaluation Planning	
(2) Documentation	
(3) Implementation and Evaluation	

C. BASIC FUNCTIONS OF DOE AND THEIR ENVIRONMENTAL REQUIREMENTS

C.1. Policy Development

C.1.a. Functions of the Policy Development Process: The Department of Energy sets the general direction for all its activities through the policy development process. This includes:

- Evaluating the range of available and potential energy resources;
- Making major decisions regarding the development and utilization of energy resources under DOE's control;
- Establishing the general mechanisms for achieving DOE's goals (technological development, regulation, voluntary controls, incentives systems, etc.);
- Clarifying and determining priorities for major DOE actions;
- Coordinating and consulting with DOE Secretarial Officers (Assistant Secretaries, Directors, or their equivalents) regarding general program directions and resource allocations;
- Coordinating and consulting with the Office of Management and Budget (OMB), the Congress, and the President on major federal policy and budgetary issues.

Figure IV-2 illustrates the functional aspects of policy development. This figure is an elaboration of Box (1) of Figure IV-1.

Note that influences external to DOE affect the elements described indirectly through the DOE policy process. For example, private interest groups and congressional desires and expectations must be considered by the Secretary of Energy and other decision makers in their Annual Policy Discussions, Policy and Fiscal Guidance, etc. In turn, the outputs of DOE's policy process affect the influences external to DOE, as illustrated by the arrow connecting the three parts of Figure IV-2. For example, legislative initiatives can have an impact on private business, energy supply, or international trade, once the initiatives have been passed by Congress or perhaps even before, due to an anticipatory response. The entire process illustrated in Figure IV-2 directly affects program and project planning within DOE.

Figure IV-2 Policy Development Part of the NMS Conceptual Framework

Dalton • Dalton • Newport L

April, 1979

C.1.b. Elements of the Policy Development Process: Recognizing that policy development is influenced by a multitude of factors, the following description of elements focuses only on its most systematic and tangible aspects.

C.1.b.(1) Annual Policy Discussions: Policy discussions between the Secretary and each Assistant Secretary or Director formally occur at least once a year as part of the annual budget process. They provide a forum for direct discussion about such issues as DOE priorities, resources, plans, strategies, and Departmental interrelationships. The discussions deal with the interests and expectations of Congress, OMB, the President, state and local governments, interest groups, etc., as well as the current state of the national and international energy supply. The product of such deliberations is general policy/guidance which establishes directions and priorities to be reflected in budget documents. The extent to which the Annual Policy Discussions actually influence day-to-day decision making, either at the Secretarial or Assistant Secretarial levels, is difficult to determine.

C.1.b.(2) Policy Guidance: DOE has no formal "policy guidance" document covering all DOE actions and linking resources to program direction. However, fiscal guidance, the National Energy Plan (NEP), and some decision memoranda serve as policy guidance to many Secretarial Offices. Such policy guidance, in turn, affects other forms of guidance in the agency. Policy guidance issued in the interim year between NEPs may establish new directions or priorities, which may or may not require new congressional authorization. At a more program-specific level, Secretarial Officers may develop their own internal policy guidance consistent with overall DOE policy.

The above notwithstanding, much of the policy guidance in DOE appears to be ad hoc and informal, occurring throughout the year. Exceptions are the other formal policy-related elements discussed below.

C.1.b.(3) Fiscal Guidance: Fiscal guidance occurs at various points in the budgetary process, both in written and oral form. The Secretary first sets general budget request ceilings for each Secretarial Office and some specific programs. Initial ceilings are negotiated and revised through additional guidance which responds to direction from OMB and a developing understanding of what is politically feasible. Within DOE the budget negotiation and justification process occurs in a series of discussions among the Secretary and other Secretarial Officers, with the advice of the Controller and the Assistant Secretary for Policy and Evaluation.

C.1.b.(4) National Energy Plan (NEP): The NEP, presented to Congress every two years as mandated by the DOE Organization Act, serves to define the position of the President and DOE on the development of energy legislation by Congress. The process leading to the NEP includes evaluation of the long- and short-term impacts of legislative initiatives suggested by the Secretarial Officers and others and examination of alternatives for meeting long- and short-term goals. Initiatives are evaluated for their impacts on energy supply and demand as well as on social, economic, environmental, international, and other sectors.

An NEP EIS, managed by the Office of Environment (EV) and the Office of Policy and Evaluation (PE), is developed in close coordination with the decision-making process. The EIS accompanies the NEP to Congress as a decision-making tool. Although the NEP is a statement of general administration policy, it does not formally offer major program direction to DOE offices until it is transformed into legislation by Congress.

C.1.b.(5) Legislative Initiatives: Legislative initiatives are proposed by DOE to Congress whenever DOE needs legislative authority to embark on new efforts or redirect its existing activities. While many legislative initiatives involve limited technical or editorial changes to existing legislation, policy-related initiatives involve major additions or changes to DOE's activities. Initiatives may be inspired by major policy direction such as the NEP or by such considerations as budget needs or program changes. Once the initiatives become law, they direct DOE's programs and projects by generally setting time frames, establishing goals and means, and assigning responsibilities.

C.1.c. Overview of Environmental Requirements: Because of the nonspecific nature of the policy process, the environmental needs and requirements of the process are broad in scope.

C.1.c.(1) Policy Planning:

C.1.c.(1)(a) Identification and Evaluation of Alternatives: A key requirement of the NMS planning component is identification of the full range of reasonable energy policy alternatives and evaluation of their environmental consequences. Since the range of alternatives considered at the policy development level is extremely broad and the alternatives themselves are only general, corresponding environmental data are necessarily less specific than at either the program or project planning levels. The types of information required include an identification of potential costs associated with environmental compliance RD&D, any significant unavoidable environmental impacts, and important unknowns which require further investigation.

Due to the relatively short time frame of the policy-decision process, efficient data management is essential to assure that information is developed in the appropriate form and within applicable time constraints. Data management activities include:

- Identification of data needs
- Planning and scheduling for data development
- Data validation and review
- Integration of data into the policy development process.

C.1.c.(1)(b) Sensitivity to Environmental Issues: To plan effectively for environmentally acceptable energy policies, DOE decision makers must understand NEPA and be aware of potential environmental effects, the cost of environmental compliance, and the fundamentals of DOE's NEPA compliance process. DOE Principals, therefore, require a basic environmental consciousness and an appreciation for the reverberations that inadequate or tardy environmental consideration create in downstream departmental activity.

C.1.c.(1)(c) Identification of Need for and Type of NEPA Compliance Documentation: In the planning phase, NEPA documentation compliance requires four actions. First, the need for a NEPA document must be determined (i.e., is this policy a major federal action which could significantly affect the quality of the human environment?). Once the need for a NEPA document has been identified, the type of document required must be established. Since the range of alternatives is quite broad at the policy level, the document would most likely be generic or institutional in nature. The preparation of required NEPA compliance documents must then be scheduled and synchronized with key decision points in the development of DOE energy policy. Finally, the cost for NEPA compliance documentation must be estimated and factored into the budget formulation process.

C.1.c.(2) Policy Documentation: As required by NEPA, documentation generated by the policy-making process must demonstrate that environmental information was duly considered in evaluating alternatives and choosing among them. Documents are required to:

- Make explicit which policy or legislative alternatives were considered, how the environmental impacts of each were analyzed, and what the environmental impacts of each alternative are.

- Identify a preferred or selected alternative(s) and clarify how environmental information and impact analyses were used in the selection decision.
- Assign responsibility, allocate resources, and establish time schedules for the preparation of environmental analyses and for the technical and editorial review of the analyses prior to their use in the decision-making process.

C.1.c.(3) Policy Implementation and Evaluation:

Implementation of DOE policies occurs through its programs and projects and through tax incentive/disincentive proposals passed by Congress. Periodically, DOE conducts formal evaluations of these programs and projects and tax legislation to assess the effectiveness of its policies. These evaluations should include an assessment from the environmental perspective.

C.2. Program/Project Planning

C.2.a. Functions of the Program/Project Planning Process: DOE's programs are developed according to the decisions made in the policy development process and communicated through such mechanisms as DOE policy guidance, fiscal guidance, the National Energy Plan, legislative initiatives, policy discussions, ad hoc policy decisions, and task forces. After programs are developed, projects are designated.

DOE plans for four basic types of programs:

- Technology RD&D Programs: This category includes all RD&D activities funded by grants, contracts, or similar instruments or conducted in-house by DOE personnel.
- Financial Assistance Programs for Other than Technology RD&D: This category includes such activities as loans or loan guarantees to encourage the commercialization of energy technologies and grants to support activities which may have direct or indirect environmental impacts (e.g., grants for state energy conservation programs or state energy extension services).
- Programs to Provide Energy-related Products or Services: In a sense, all of DOE's activities involve the provision of energy-related products or services. However, this category has been defined to include such activities as:
 - Marketing electric power and activities associated with providing such power
 - Producing and reprocessing nuclear fuels and managing nuclear wastes
 - Producing and testing weapon components
 - Managing oil, shale oil, or other fuel reserves
 - Miscellaneous activities such as extracting other mineral resources or raising crops or livestock on land owned or controlled by DOE
- Regulatory Programs: Regulatory programs are intended to foster economic equity, fair competition, and/or the prudent use of energy resources by controlling their availability and/or cost.

They may also protect the public health and safety through licensing or permitting certain energy facilities or developments.

In technology RD&D and products/services programs, mission areas are identified by the program office and program plans are developed for each area. These program plans govern the development of DOE's technology-related outlay activities. As the program plans become more developed, certain activities are more clearly defined and are designated as projects. One program plan may include several projects.

Program planning in regulatory and financial assistance programs now consists primarily of the regulations development process. Regulations should be planned and developed according to the needs identified and authorities obtained at the policy level. Other elements of program planning for these two types of programs will become more readily distinguishable in the future.

All programs have in common the need to obtain funds, i.e., to develop and defend budget requests which support the achievement of program goals, and to plan for the orderly disbursement of funds.

The functions of the program/project planning process are presented in Figure IV-3. This figure is an elaboration of Box (2) of Figure IV-1.

C.2.b. Elements of the Program/Project Planning Process: This section describes the major systems/elements of the program/project planning process: Program and Project Management System and major system acquisitions, regulations development, directives development, and budget formulation. International agreements and Memoranda of Understanding, which are less central to this process, are also briefly addressed.

C.2.b.(1) Program and Project Management System (PPMS) and Major System Acquisitions (MSAs): The PPMS and MSA process provide policy and guidance for use in the development, approval, and execution of DOE's outlay programs. PPMS tracks programs from the basic research phase through commercialization. Although PPMS and MSA both relate to the acquisition of major systems and are quite similar, the two systems are not currently integrated. However, formal integration is likely to occur in the future.

PPMS is an operational DOE management system governing major outlay programs, while MSA is a planning system now under design. PPMS is also closely linked with the budget, financial control, and procurement systems, while the MSA process

is not. For these reasons, this discussion focuses on PPMS.

The fundamental objectives of PPMS are to fully define projects before any commitment of major resources occurs and to ensure that all major programs are developed with clear, operational, time-phased objectives. PPMS, initially presented in a memo from DOE Under Secretary Dale Myers on May 31, 1978, is likely to become institutionalized in the form of a DOE order. Although PPMS is in use, it is undergoing revision as experience reveals problems and opportunities for its improvement. From all indications, it will soon become the primary management and review process for all major system acquisitions.

The development of an Energy System Acquisition Project Plan (ESAPP) is required by PPMS to serve as the baseline planning document for each DOE technology RD&D project with fiscal year costs of over \$50 million or lifetime costs of \$200 million or more. The guidelines in PPMS are also being used to produce ESAPP-type documents for DOE projects which are not major system acquisitions but which have total estimated costs exceeding \$5 million. This plan covers a project from its proposal through its completion. Although each plan is unique to a particular project, certain general elements are required for all plans, including an environmental annex. The purpose of this annex is to identify apparent or potential environmental barriers to the development of a specific technology or process and to describe the control technology, supporting research, and other program efforts required to overcome environmental constraints.

PPMS also establishes the Energy System Acquisition Advisory Board (ESAAB) to advise the Secretary on initiation of new major energy system projects, to authorize each of several successive phases of development, to modify an authorized phase approval, or to cancel a project. The ASEV, several other Assistant Secretaries, and two Deputy Under Secretaries serve on the ESAAB.

The ESAAB advises the Secretary at four key decision points, shown on Figure IV-4. The first of these occurs when an energy technology is capable of moving from research-related activities (exploratory development) to actual development. This point marks the beginning of a formal energy system acquisition project. Other mandatory ESAAB reviews occur at transition points between technology development and engineering development, engineering development and demonstration, and demonstration and commercialization/production/operation.

Although PPMS is intended to cover the development of all significant DOE technology programs, including those related

Figure IV-3 Program/Project Planning Part of the NMS Conceptual Framework

Dalton • Dalton • Newport
April, 1979

Figure IV-4 Major System Acquisitions - Phase Transition Decision Points

Points for Environmental Consideration

- 1 Environmental Study Included in PPMS
- 2 Environmental Study Recommended
- 3 EV Membership Role Included in PPMS

* IMD 0202 - Establishment of Interim DOE Program Management Review and Control System, discussed in "Analysis of Department of Energy Guidance Documents for Responsiveness to NEPA," Part I, October, 1978
Dalton - Dalton - Newport.

From Myers Memo May 31, 1978

to the development and distribution of DOE energy-related products and services, it is not now a planning system for every DOE outlay program and project.

C.2.b.(2) Regulations Development: Regulatory actions constitute a major portion of those DOE activities not directly associated with technology development. Procedures for the development and analysis of all DOE regulations, standards, and guidelines, except those issued by the Federal Energy Regulatory Commission (FERC), are outlined in Draft DOE Order 2030.____. This draft order represents DOE's response to Executive Order 12044, "Improving Government Regulations," which requires government agencies to distinguish between "significant" and "non-significant" regulations and to determine which "significant" regulations will create "major impacts." Figure IV-5 describes the regulations process.

Upon initiation of a regulation, the lead office determines whether it is significant or not, using the criteria provided in draft DOE Order 2030.____. One of the criteria for determining significance is expected environmental effect. The draft order requires that all Secretarial Offices of DOE, including EV, be informed of the proposed regulation and its significance determination through the ACTS system (described in Section D.2.h.(2) of this chapter). The Secretarial Offices may, in turn, inform the lead office of their wish to participate in the development of the proposed regulation. Thus, responsibility for initiating their own participation rests with the individual Secretarial Offices. At a minimum, the lead office is required to work with EV and the Office of General Counsel (GC) to ensure the regulation's compliance with NEPA. This process is summarized in Figure IV-5.

C.2.b.(3) Directives Development: Internal DOE management policies and procedures are formally established and communicated through the DOE directives system described in DOE Order 1321.1.* The four types of directives are orders, notices, announcements, and page changes. Orders are of primary interest in this discussion because they generally deal with program and project planning and management.

The system for processing DOE directives is illustrated in Figure IV-6. It provides an opportunity to review draft

*For a fuller discussion of the DOE directives system, see "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Part III, November, 1978.

Figure IV-5 Summary of Procedures for the Development and Analysis of New Regulations, Standards and Guidelines

Figure IV-6 DOE Directives Development System

orders on those department-wide management or decision-making processes that should explicitly address environmental issues. Many directives directly or indirectly govern activities which have the potential for significantly impacting the environment. Because appropriate management and decision-making processes can be built into directives, such as requirements for environmental input and EV involvement, they can substantially effect positive changes in program/project planning and management.

The development of a new directive is theoretically coordinated with DOE offices interested in its subject matter. The initiating office may recommend offices to review and coordinate orders, but the Directives Control Point (DCP) in the Directorate of Administration (AD) is ultimately responsible for determining which offices are included in the coordination and review process.

C.2.b.(4) Budget Formulation: The budget formulation process is the most important central management tool for directing DOE programs and projects. It is the primary mechanism for defining short- and long-term objectives, developing programmatic strategies, and allocating resources. Program and field offices develop their budget requests by determining the scope, duration, and objectives of their programs and projects. DOE uses the ERDA "Budget Policy and Practices Handbook" as its basic procedural budget manual.

The mechanics of the budget formulation process are extremely complex, covering a sequence of events from the development of policy and fiscal guidance by DOE administrators to the eventual submission of a DOE budget to the Office of Management and Budget (OMB) and Congress. Briefly, policy and fiscal guidance is issued by the Office of the Secretary through the staff offices of the Controller (CR) and Policy and Evaluation (PE). The OMB provides fiscal and some policy guidance in this process. Based upon this guidance, field offices and program divisions submit program budget estimates to CR for analysis. These estimates are reviewed; program planning guidance is issued; policy issues are identified; fiscal commitments are projected; and budget recommendations are submitted to the Secretary. The Secretary makes policy decisions, hears appeals, and determines the budget to be submitted to OMB. OMB finally determines the agency budget to be submitted to Congress. The major features of this process appear in Figure IV-7.

C.2.b.(5) International Agreements: DOE becomes involved in three major types of international agreements: those for technical and information exchange, those for nuclear fuel sales and reprocessing, and those for

Figure IV-7 Generalized DOE Budget Process

transmitting electric power across national borders. The first type involves cooperative work and exchange of information on specific technical projects. These agreements may include any number of countries and can involve supplying capital for the actual operation and management of a facility. They may be initiated by any country, including the United States. The Assistant Secretary for International Affairs (ASIA) negotiates these agreements for DOE, usually with participation by the State Department, and monitors the progress of the project during its implementation.

Agreements involving selling and reprocessing nuclear fuel are also negotiated by the Assistant Secretary for International Affairs. Requests for nuclear fuel from foreign countries are handled through this office, which develops and negotiates the terms of the agreement. When a foreign country wishes to resell nuclear fuel to a third country, it can do so only after it has negotiated a "subsequent agreement" with the United States. This is also negotiated by ASIA, who develops the terms under which such a resale may be made. All such agreements are designed to control nuclear weapons proliferation.

Agreements for international electric power interconnections are based on Executive Order 10485. This order states that any electric power facility whose power lines cross international boundaries must have a Presidential permit issued by DOE. Such international interconnections raise questions about responsibilities for environmental impacts and the need to comply with NEPA.

C.2.b.(6) Memoranda of Understanding (MOUs): An MOU is the basic type of policy coordination instrument in DOE's external communication system. MOUs are designed to coordinate cooperative efforts with public agencies and to document the framework and procedures for carrying out these efforts. Their overall objective is to enable DOE to efficiently coordinate its activities with other agencies.*

As described in DOE Order 5031.1, "Administration of Policy Coordination Instruments with Government Agencies," MOUs may deal with department-wide, programmatic, or regional policy and are entered into by different administrative levels of DOE depending upon the type of policy they involve.

*For a further discussion of Memoranda of Understanding see "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Part IV, December, 1978.

An MOU usually references the legislative authority governing the activities, states the broad areas of cooperation, and establishes a procedure for formulating and coordinating programs. As a mechanism for communicating policy already developed, MOUs influence the direction of program development and planning.

C.2.c. Overview of Environmental Requirements: Insofar as DOE programs constitute major federal actions that could significantly affect the quality of the human environment, the CEQ NEPA regulations explicitly require that environmental issues be considered at appropriate points in the program/project planning process to assure that implementation is carried out in an environmentally acceptable manner.

C.2.c.(1) Program/Project Planning: At the program/project planning level, the environmental planning component includes two primary tasks. The first is the identification and evaluation of alternatives. This includes the identification of environmental issues, an assessment of the current state of environmental knowledge, and a determination of environmental research needs and their costs. The second task is identification of documentation needs. This includes determining the type of documents needed, scheduling their preparation, and estimating the preparation costs. These tasks apply to both technology and regulatory programs, projects, and/or actions.

C.2.c.(2) Program/Project Documentation: Tasks required to comply with program/project NEPA documentation requirements in this stage include detailed planning for document preparation, data collection and analysis, identification of mitigation and monitoring needs, review of documents produced, selection of a preferred alternative, and preparation of a record of decision.

C.2.c.(3) Program/Project Implementation and Evaluation: Environmental requirements related to the implementation and evaluation phases of program/project activity are treated in the following section. However, information from the implementation and evaluation of previously executed programs and projects should be fed back into the planning and preparation of documents for new programs/projects.

C.3. Program/Project Implementation and Evaluation

C.3.a. Functions of Program/Project Implementation and Evaluation: Implementation and evaluation of DOE programs and projects involves a variety of functions, which are outlined in Figure IV-8. This figure is an elaboration of Box (3) of Figure IV-1. These functions are addressed briefly in this section.

As Figure IV-8 illustrates, the four different types of DOE programs, as defined in this report, do not characteristically involve all the functions discussed. For example, technology RD&D programs typically need to procure services, materials, components, and/or facilities, while regulatory programs do not. Conversely, regulatory programs often include an appeals process with adjudication, whereas technology RD&D programs do not (excluding contract disputes). In addition, every project under a given program type will not involve all the functions listed for that type of program. For example, not every technology RD&D project requires site selection, acquisition, and/or development. Thus, generalizations about program/project implementation and evaluation are obviously difficult. However, the distinctions implied in Figure IV-8 were found to be useful in focusing the development of the NEPA Management System.

C.3.b. Elements of Program/Project Implementation and Evaluation:

C.3.b.(1) Project Management Development: The draft DOE Order, "Project Management in the Department of Energy," outlines two principal mechanisms for project management: Project Charters and Project Management Plans. The Project Charter is a formal document issued by the appropriate Assistant Secretary or the Director of Energy Research. Each technology RD&D project and energy-related product or service project should have its own Project Charter to ensure clear-cut assignments of responsibility and to outline specific project objectives.

Project Management Plans are developed for each project by its managing organization. They outline the project's plans, organization, and systems. As a general rule, the plan should be completed and signed prior to starting the project and kept current as the project develops.

C.3.b.(2) Procurement Processes: DOE uses various processes to procure goods and services.* The Department's

*For a fuller discussion of the NEPA Management System and the procurement process, see Appendix B.

Figure IV-8 Program/Project Implementation and Evaluation Part of the NMS Conceptual Framework

procurements can be divided into two broad categories: those over \$5 million and those under \$5 million. Within these two broad categories, procurements are either competitive or non-competitive. For the purposes of this discussion, common steps have been identified which may be considered typical of the procurement process, although not all steps apply to all types of procurements.

Major DOE procurements are processed and reviewed by either a Source Evaluation Board (SEB) or an Architect/Engineer (A/E) Board. The SEB process is discussed briefly here as an example and is depicted in Figure IV-9. This process is described in four DOE documents: IMD 0708, "Business Strategy Groups," IMD 0706, "Designation of Source Selection Officials," the Source Evaluation Board Handbook ERHQ-0013, and IMD 0707, "Solicitation Review Panel."

Following the process from the left of the figure, the program or field offices identify broad program objectives which are translated into specific program needs or requirements and provide the basis for the preparation of a Procurement Request Form.

As early as possible after the initial drafting of the solicitation for a major procurement program, a Business Strategy Group (BSG) is formed to develop an acquisition strategy for the proposed procurement. At this point, any general environmental issues may be identified.

For projects anticipated to exceed \$5 million (for all contracts and all years), the draft solicitation is sent to the Director of Procurement and Contracts Management and a Source Evaluation Board (SEB) is established. The SEB reviews and approves the draft solicitation and forwards it to the Solicitation Review Panel (SRP), which reviews and approves the solicitation. The approved solicitation from the SRP is returned to the SEB for modification and final approval. It is then ready to be released to the public.

Prospective contractors, grantees, etc., submit proposals to DOE in response to the solicitation. Proposals for the larger, more complex procurements are reviewed by an A/E Board or a Source Evaluation Board. Smaller solicitations are reviewed by formal or informal committees within the program office.

The entire procurement process from the planning through the award completion stage is tracked through a computerized system, the Integrated Procurement Management Information System (IPMIS), except for procurements of ten thousand dollars or under.

Figure IV-9 DOE Procurement Process Involving a Source Evaluation Board

□ ASSISTANCE FROM OFFICE OF ENVIRONMENT (EV)

* RECOMMENDED EV MEMBERSHIP ROLE

Δ RECOMMENDED EV ADVISORY ROLE

NOTE: Both roles include guidelines and criteria developed by EV with assistance and concurrence from PR.

* SMALL BUSINESS/MINORITY BUSINESS/LABOR SURPLUS

C.3.b.(3) Site Selection, Acquisition, and Development Processes: Implementation of DOE programs/projects often requires the selection, acquisition, and development of sites. Those sites not acquired through the procurement process are subject to the policies and procedures outlined in the DOE draft order, "Site Selection." The draft order, "Site Development and Facility Utilization Planning," describes the policies, procedures, and authorities for site development and the utilization of facilities.*

When site selection is not handled as part of the procurement process, DOE identifies alternative sites and establishes a Site Evaluation Committee. This committee develops site evaluation criteria, investigates prospective sites, and produces findings. This includes detailed site evaluation surveys of potential sites to determine their suitability in terms of the site evaluation criteria. Resulting information is incorporated in the Site Evaluation Report prepared by the committee.

The purpose of the Site Development and Utilization Plan, as defined in the appropriate draft order, is to assist, document, and summarize the ongoing site utilization and planning processes of individual field and project offices and operating contractors. Preparation of the planning documents requires compliance with various federal and state statutes, regulations, and executive orders related to environmental quality. Specifically, they must provide for the prevention, control, and abatement of environmental pollutants.

The draft order, "Real Estate Management," establishes administrative requirements for the acquisition, use, and disposal of real property holdings of DOE. Certain real estate management reports are required, depending upon the type and use of property. In some cases this includes a Radiation Contamination Clearance Report in which the location, quantity, and identity of radioactive materials are noted and any decontamination actions are documented.

C.3.b.(4) Design and Construction Management Processes: Procedures for the effective planning, design, and construction of sites and facilities are outlined in AEC Manual

*For a fuller discussion of site selection and site development and facility utilization planning, see "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Part VI, February, 1979.

Appendix 6101, "Management of Construction Projects." It requires that facilities be designed to: 1) achieve minimum construction costs consistent with programmatic environmental, security, and safety requirements; 2) achieve technical adequacy; 3) achieve optimum economy in operation and maintenance; and 4) assure that appropriate consideration is given to the expected period of use, sound construction practices, quality assurance requirements, energy conservation requirements, and decontamination and decommissioning requirements for structures used for research, development, production, or application of special nuclear materials.*

C.3.b.(5) Evaluation of Programs, Projects, and Regulations: The Office of Policy and Evaluation (PE) is the principal coordinator of the Department's evaluation efforts mandated by the DOE Organization Act. The unsuccessful Policy and Program Planning System (PPPS), which was administered by PE, was designed to coordinate the evaluation and planning efforts of DOE with the budget cycle. While various aspects of the PPPS have been absorbed by other systems, there is a continuing effort to tie evaluation activities closely to the budget cycle to facilitate decision making and resource allocation. The program/project evaluation effort currently underway at DOE has two major aspects: technological program evaluation and regulatory program evaluation.

Because PPPS had failed, the Program and Project Management System (PPMS) was designed, in part, to fulfill the evaluation/planning needs of technology RD&D programs and programs which provide energy-related products and services. PPMS calls for Program Plans, which replace the old Management Review and Control Documents (MRCDS) and Multi-Year Program Plans of PPPS. The new Program Plans are to contain, among other things, criteria for the evaluation of program effectiveness, including measures of technical and economic success and program milestones. Detailed procedures for program reviews and evaluations are currently being established.

A project evaluation element for technology RD&D has been built into the DOE Project Management System discussed in Section C.3.b.(1) above. The required Project Management

*For a fuller discussion of DOE's design and construction management processes, see "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Part VI, February, 1979.

Plans are to contain criteria for evaluation, such as project milestones. Senior management officials in headquarters program offices, Field Office Directors, and the Controller are to provide independent review and project performance assessment. Additionally, the Project Charter is to be reviewed annually and revised as needed to improve effectiveness.

The Energy System Acquisition Advisory Board (ESAAB), which reviews major system acquisition projects at key decision or transition points, also serves an evaluation function. The ESAAB may recommend major modification to, or cancellation of, a project which is not meeting its objectives.

In terms of DOE's regulatory activities, there is currently only one institutionalized mechanism for accomplishing program review. Draft DOE Order 2030., "Procedures for the Development and Analysis of Regulations, Standards, and Guidelines," provides a system and guidelines for the review and republication of DOE regulations within five years of their original effective date.

All regulations scheduled for review are listed in an internal DOE Semiannual Regulations Agenda. The regulation under review and any related regulations must be republished in the Federal Register together with a request for comments from other governmental agencies and the public on ambiguities, needed changes, and the expected impacts of either continuing or terminating the regulation. Following the period of public comment, the administering office prepares a determination which presents conclusions regarding the continuation, modification, or termination of the regulation (Figure IV-10, Boxes 7 and 8). The General Counsel and the Assistant Secretary for Policy and Evaluation have the opportunity to review and concur in this statement.

C.3.b.(6) Adjudication Procedures: The internal DOE adjudication process is used when the implementation of a DOE program or regulation is appealed by the applicant. This process generally involves the taking of written and oral evidence, production of a legal record or hearing transcript, staff analysis and recommendation, and a decision by an administrative law judge.

Program offices in which the disputed action is taking place may, in some cases, issue initial adjudicatory determinations, but the Office of Hearings and Appeals has final determination authority within DOE.

Areas subject to adjudicatory procedures include:

Figure IV-10 Procedures for the Republication and Review of Existing Regulations
(From Draft Order DOE 2030.)

- Appeals of determinations made by DOE program offices in the areas of oil pricing and allocations, import and export of natural gas and electric power, coal and geothermal leasing, the Privacy Act, the Freedom of Information Act, etc.
- Applications for exemptions or adjustments.

During an adjudicatory proceeding, DOE program office decisions to issue (or not issue) a permit, to grant (or not grant) a lease, or to release information to the public may be reversed or substantially changed. Adjudicatory determinations may also be made on the degree to which a given DOE regulation applies to a particular activity or industry.

C.3.c. Overview of Environmental Requirements: Because the implementation and evaluation of DOE's programs/projects could significantly affect the environment, NEPA requires consideration of environmental issues at appropriate phases in this process.

C.3.c.(1) Implementation/Evaluation Planning: Long-range program/project plans should be established prior to the actual implementation and evaluation processes. In addition, information acquired during program/project implementation and evaluation should be incorporated into future policy development and the environmental planning process.

C.3.c.(2) Documentation: Most of the NEPA documentation requirements for DOE programs and projects should have been met during the planning process. However, additional documentation may be needed for project actions not anticipated in the relevant program or project EA or EIS. Slight changes in technology projects can generally be accommodated by a supplement to the existing EA or EIS. The program office is responsible for recognizing when a supplemental NEPA document may be required. In some cases, specific actions undertaken under regulatory programs may require "project-level" EAs or EISs.

C.3.c.(3) Implementation and Evaluation: By law, DOE is responsible for assuring that its facilities and other projects are developed in an environmentally acceptable and safe manner. This requires detailed evaluation of environment, safety, and health aspects during design, construction, operation, and decommissioning of the facility and feedback of such information to the design process and to operations. DOE must conduct needed environmental control technology RD&D and other environmental research to support its programs and projects and maintain an independent program to assure that these requirements are being adequately addressed.

**D. Environmental Planning Part
of the NEPA Management System**

D. ENVIRONMENTAL PLANNING PART OF THE NEPA MANAGEMENT SYSTEM	IV-36
1. Requirements of the Environmental Planning Part	IV-36
a. Identification and Evaluation of Alternatives and Needed Environmental Research	IV-36
b. Identification of the Need for and Type of NEPA Compliance Documentation	IV-37
c. Functional Summary	IV-39
2. Existing Mechanisms for Meeting Environmental Requirements	IV-41
a. Annual Policy Discussions	IV-41
b. National Impact Assessments	IV-41
c. Regional Impact Assessments	IV-41
d. Environmental Issues Committee	IV-41
e. Determination of NEPA Compliance Documentation Requirements	IV-42
f. Use of EAs and EISs in Decision Making	IV-42
g. Environmental Planning Process for Technology RD&D	IV-42
(1) Environmental Readiness Documents	
(2) Environmental Development Plans	
(3) Project Environmental Plans	
(4) Environmental Coordinating Committees	
h. Support Mechanisms and Systems	IV-46
(1) Action and Information Memoranda System	
(2) Action Coordination and Tracking System	
(3) Reports to Congress	
(4) Public Hearings	
(5) Task Forces	
(6) Regional Representatives	
3. Unsatisfied Environmental Planning Requirements and Potentially Responsive Approaches	IV-50
a. Fuller Participation by the Office of Environment in the Development and Review of DOE Policy Guidance and Legislative Initiatives	IV-50
(1) Involvement in the Development of Policy-Level Strategy Papers	
(2) Increased Involvement in the Development and/or Review of All DOE Legislative Initiatives	
(3) Increased Participation on Policy Task Forces	
(4) Continued Emphasis on and Development of the Environmental Issues Committee	
b. Involvement of the Office of Environment in the Regulations Development Process	IV-52
(1) Establishment of Liaison to Regulatory Offices	
(2) Development of Environmental Analysis Mechanisms for Proposed Regulations	
c. Extension of the Office of Environment's Involvement in the Energy Technology RD&D Planning Process	IV-54
(1) Environmental Review of Energy Technology RD&D Below the Major System Threshold	
(2) Environmental Review of Projects in Phases One Through Three of PPMS	
(3) Increased Program Office Involvement in the Preparation of Project Environmental Plans	
d. Remedying the Uneven Level of Compliance in NEPA Documentation	IV-55
(1) Application of Initial Criteria of Environmental Effects and Categorization of DOE Programs and Activities	
(2) Use of Preliminary Environmental Reviews and Checklists	
(3) Tiering of Documents	
4. Summary of Mechanisms for Meeting Environmental Requirements	IV-65

D. ENVIRONMENTAL PLANNING PART OF THE NEPA MANAGEMENT SYSTEM

D.1. Requirements of the Environmental Planning Part

The requirements of the environmental planning part of the NMS, while broad in scope, can be classified into two major categories:

- Identification of the reasonable range of policy, program, or project alternatives; assessment of the environmental issues associated with each alternative; and identification of, and planning for, needed environmental research.
- Identification of the need for and type of NEPA compliance documentation required for each proposed action.

While these categories are discussed separately, in many aspects they are mutually supportive. For instance, the alternatives analysis required for an EIS would contain data developed as part of the alternatives evaluation process identified in the first area above.

D.1.a. Identification and Evaluation of Alternatives and Needed Environmental Research: Whether at the policy, program, or project level, the identification and evaluation of alternatives from an environmental perspective is a central function of the planning component of the NMS. Distinctions between these levels relate to the range of alternatives under consideration and the concomitant degree of specificity achievable in their associated environmental findings.

The widest array of alternatives is found at the policy level (e.g., technological versus regulatory options; energy conservation versus energy production; coal versus nuclear, etc.). The range of alternatives narrows at the program level (e.g., should process X or process Y be used to increase energy production?), and narrows even further at the project level (e.g., given process X as a means to increase energy production, should subprocess X₁ or X₂ be used and where should it be located?).

Once the full range of reasonable alternatives has been identified, the tasks which must be completed at each phase of the process are basically similar. These include:

- Identification of the fundamental environmental issues associated with a proposed action and its

alternatives. This requires a multidisciplinary assessment to identify the type and scope of environmental issues.

- Evaluation of the current state of knowledge concerning identified environmental issues and assessment of the "risks" associated with each issue. This evaluation requires extensive feedback from DOE and non-DOE environmental research findings on both energy technology and regulatory issues. Current and proposed standards and regulations must be evaluated in terms of the requirements imposed on emerging technologies. Research findings should also include estimates of environmental control technology costs. In addition, a risk assessment is necessary to determine which of the identified issues presents the greatest potential problems (i.e., what are the "show-stoppers?"). This task, therefore, culminates in an assessment of the current state of knowledge regarding the potential environmental impacts of proposed regulatory or technological actions and an identification of the key unresolved environmental issues.
- Identification, prioritization, and scheduling of required environmental research. The identified environmental research must be scheduled to meet the time requirements of the action under consideration, whether at the policy, program, or project level. Because the turnaround time for legislative and regulatory proposals is relatively short, EV must be prepared to mobilize quickly and produce results expeditiously to be responsive to their environmental requirements. When the time frame for producing technology and regulation-related research results is longer, EV can anticipate and plan to satisfy environmental research needs in a more regular, institutionalized fashion.

D.1.b. Identification of the Need for and Type of NEPA Compliance Documentation: NEPA compliance documents are those required by Section 102(2)(C) of NEPA and by the CEQ regulations on NEPA. These may be environmental impact statements or environmental assessments and a number of different kinds of supporting documents. Section 102(2)(C) states that "environmental impact statements are to be included in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."

The NEPA compliance documentation aspect of the NMS environmental planning component involves the following tasks:

- Identification of actions which require NEPA compliance documentation. It is essential that the program offices responsible for the implementation of proposed actions be able to determine when a NEPA compliance document is required. A systematic procedure must be developed and implemented which provides direction and guidance to program offices to facilitate their identification of actions requiring documentation. It is the responsibility of EV to establish a systematic procedure, provide necessary guidance and training, and monitor and concur or nonconcur in program office determinations.
- Identification of the type of NEPA compliance documentation required. DOE must be consistent in its implementation of Section 102(2)(C). The type of EA or EIS which may be required can vary widely (e.g., policy, programmatic, role, project, site-specific, etc.). Therefore, one of the major objectives of the NMS environmental planning part is to identify the type of document required. This varies primarily according to the nature and range of alternatives being considered and the significance of their associated environmental impacts. Proposals with significant impacts require EISs, while those with impacts whose significance is uncertain require at least EAs.
- Scheduling the preparation of required NEPA compliance documents. This schedule should be synchronized with key policy, program, or project decision points.
- Estimation of the cost for NEPA compliance document preparation. A cost estimate must be factored into the budget formulation process.

Finally, it should be noted that it is virtually impossible for EV to police the actions of the entire agency for total compliance with NEPA; the consideration of environmental factors, the recognition of NEPA compliance documentation requirements, and the quest for appropriate environmental data must ultimately become a part of standard operating procedures for all DOE policy and program/project decision makers. EV can provide guidance and training to DOE staff to assist the organization in achieving its goals in an environmentally acceptable manner. Until such time, they remain a matter of conscious effort, supported and encouraged by EV.

D.l.c. Functional Summary: Figure IV-11 summarizes the functions of the environmental planning part of the NMS. This figure is an elaboration of Box (4) of Figure IV-1.

The environmental planning part of the NMS, as indicated in Figure IV-11, makes no distinction among the functions of policy, program, or project-level activities. The identification and evaluation of alternatives, as well as the identification of NEPA compliance documentation requirements, is similar for all three levels of DOE activity. The major difference between each level of activity is the nature of alternatives considered and the specificity of environmental data.

Figure IV-11 Environmental Planning Part of the NMS Conceptual Framework

Dalton • Dalton • Newport

April, 1979

D.2. Existing Mechanisms for Meeting Environmental Requirements

EV and, by extension, the Department have at their disposal a number of tools which can more systematically and effectively bring environmental considerations to bear on policy, program, and project decisions. Formal NEPA documents are, of course, required by law. In addition, other mechanisms, skillfully combined, can be potent reinforcers of the NEPA process.

D.2.a. Annual Policy Discussions: The Annual Policy Discussions, as outlined in Section C.1.b.(1) of this chapter, provide an opportunity for a direct two-way information exchange between the Assistant Secretary for Environment (ASEV) and the Secretary. The Secretary provides the ASEV with general policy guidance which becomes an important consideration in the establishment of EV's program priorities. There is also a limited opportunity for ASEV to comment on or respond to the proposed policies of other Secretarial Offices from an environmental perspective.

D.2.b. National Impact Assessments: The Environmental Impacts Division of EV's Office of Technology Impacts (OTI) is the focal point in EV for the preparation of national impact assessments and their associated data analysis. EV uses the information OTI transmits, in the form of an Annual Environmental Analysis Report (AEAR), principally as the basis for its input to the development and review of the National Energy Plan. The AEAR contains projected data on air and water pollutants, solid wastes, water use, and land use. Scenarios of various energy production and use provided by the Office of Policy and Evaluation and a number of other sources serve as the basis for this report.

D.2.c. Regional Impact Assessments: The Regional Assessments Division of OTI prepares regional assessments to determine the land use, water use, and socioenvironmental impacts associated with various scenarios for the implementation of energy technologies. Regional impact assessments emphasize both natural system and human resource constraints on regional energy technology assimilation. Regional assessments, in some cases, also include environmental impact mitigation strategies.

D.2.d. Environmental Issues Committee (EIC): The EIC serves as a primary communications link between EV and a cross-section of DOE program and staff office personnel. It provides a bi-monthly forum for the identification and discussion of environmental policy issues which may affect the development of DOE programs and activities. The EIC has tended to focus on extra-DOE regulatory issues (e.g., Toxic Substances Control Act impacts, Water Resources Council

issues, surface mining regulations, follow-on steam electric New Source Performance Standards actions, etc.). The Environmental Issues Committee is one of the few mechanisms through which EV can regularly disseminate environmental analysis and research findings to an array of DOE program and policy decision makers. The EV staff assigned to support the EIC conduct the necessary issue analysis and research to provide a basis for discussion at each EIC meeting.

D.2.e. Determination of NEPA Compliance Documentation Requirements: Although determination of needed environmental documents is a requirement, there are no systematic procedures for this function and it is not performed consistently agency-wide. It appears that the determinants employed throughout DOE are the individual responsible program office's best guesses or the judgement of EV's NEPA Affairs Division. In some cases, adequate documentation results; in many cases, it does not.

D.2.f. Use of EAs and EISs in Decision Making: EAs and EISs are designed to identify environmental issues and provide data on the environmental consequences of proposed actions and their alternatives. As products which are intended to inform the decision-making process, EAs and EISs must be provided in a timely manner and be succinct enough to facilitate review. In practice, the principal benefits of EAs and EISs are realized through the process by which they are prepared. During the developmental stages of the proposed action, the NEPA documentation process forces program officials to consider more fully the range of reasonable alternatives and related environmental consequences. Thus, by the time an EA or EIS is actually issued, its preparation process should have already affected the evolution of the proposed action.

D.2.g. Environmental Planning Process for Technology RD&D: EV has invested heavily in the development of an environmental planning system for technology RD&D. The system consists of three interrelated documents and the process which produces them. These documents are the Environmental Readiness Documents (ERDs), Environmental Development Plans (EDPs), and Project Environmental Plans (PEPs). As internal management documents, they:

- are related in purpose and timing to the Phase Transition Decision Points described in the DOE Program and Project Management System (PPMS), and
- "enable DOE to carry out responsibilities imposed by the National Environmental Policy Act of 1969 (NEPA) and the National policies which it embodies,

while developing energy technologies responsive to national needs."*

The relationships among these documents and between them and the major energy system acquisition process described in PPMS are shown in Figure IV-12. The three environmental planning documents are described below, as are Environmental Coordinating Committees (ECCs), which are central to the environmental planning system.

D.2.g.(1) Environmental Readiness Documents (ERDs):

ERDS are iterative assessments of the environmental readiness of an energy technology to move to the next phase of the acquisition process. They provide a critical review of environmental data and information generated in research and development programs carried out by DOE and others. The ERD serves several functions:

- As an assessment prepared independently by EV, it provides the ASEV with an objective basis on which to act as a member of the Energy System Acquisition Advisory Board and to inform other departmental decision makers and the public about environmental problems and issues which must be resolved during subsequent phases of the acquisition process.
- It assesses current and proposed regulations which will affect commercialization of a technology.
- It provides program managers with an evaluation of the environmental risks and uncertainties in possible applications of the technology and an assessment of environmental control technology needs and costs.
- It reviews the significance of remaining, unresolved environmental concerns and directs attention to areas needing priority emphasis in continuing environmental research.
- It supports EIS preparation. As an analytical reference document, the ERD is useful in scoping environmental investigations and supplying quantitative information about the process or technology being explored.

*Memo on "Environmental Planning and Review in Relation to Major Systems Acquisition Projects" from Dario Monti, Director of Division of Technology Assessments, EV, January 12, 1979.

Figure IV-12 Relationship of the DOE Environmental Planning System to the Major Energy System Acquisition Process

ERDs, which are prepared by EV staff (Division of Technology Assessments, OTI) in consultation with the technical program offices, draw on research results from EV technology assessments, DOE research, contractor research, and the scientific literature. ERDs are revised and updated at each new Phase Transition Decision Point in the technology's development.

D.2.g.(2) Environmental Development Plans (EDPs): Initiated in 1976, the EDP has evolved into EV's central planning mechanism for environmental research associated with emerging energy technologies. The objective of the EDP is to identify and link required environment, safety, and health (ES&H) research with key events along the technology RD&D continuum. In this respect, it provides continuing environmental input to the process of a technology's development toward commercialization.

The EDP draws on the ERD analysis for identification and prioritization of environmental concerns. A course of environmental research is laid out in the EDP which identifies current or planned research and areas in which additional research should be initiated as technical development proceeds. Milestones for research, assessment, and NEPA compliance documentation are established. The EDP and the Technical Program Plan (which defines the strategy for one or a group of closely related projects involving a technology moving through the acquisition process) together constitute a DOE Outlay Program Plan for a technology. Thus the EDP is a means of synchronizing environmental research with technology development.

D.2.g.(3) Project Environmental Plans (PEPs): The basic research planning document for DOE project-level activities is the Project Environmental Plan. This plan is very similar to the relevant EDP in scope and content, but, while the EDP addresses an entire technical program, the PEP is closely tailored to the specific system selected for development and the needs of the ensuing development stage(s). The PEP is prepared by EV staff and is an attachment to the Energy System Acquisition Project Plan (ESAPP), which is discussed in Section C.2.b.(1) of this chapter.

D.2.g.(4) Environmental Coordinating Committees (ECCs): Environmental Coordinating Committees provide a forum for information exchange and coordination among technology program offices and EV divisions in carrying out environmental assessment responsibilities within DOE. Each ECC is a two-tiered committee. The parent committee is comprised of the senior program managers of the technical and environmental offices. It has general oversight responsibility and delegates responsibility for actual EDP and PEP preparation to subcommittees. Each subcommittee is responsible for a particular energy system selected for development or

commercialization. The parent committee meets formally only when necessary to resolve intra-agency issues or conflicts surrounding environmental concerns which cannot be resolved at the subcommittee level.

Subcommittees are chaired by staff members from EV's Division of Technology Assessments. They consist of project managers and planners from the cognizant technical program offices and EV research divisions. ECC subcommittees prepare EDPs and PEPs and review the ERDs prepared by EV. Subcommittee working groups, made up of representatives from appropriate technical and environmental research divisions, translate the research needs defined in the EDP and PEP into detailed task plans for implementation at field sites and research laboratories.

D.2.h. Support Mechanisms and Systems: Several mechanisms support the basic elements of the environmental planning part of the NMS. These mechanisms offer EV a way of staying sufficiently informed about significant agency actions to press for compliance with NEPA and adequate consideration of environmental issues. This category includes: the DOE Action and Information Memoranda System, the DOE Action Coordination and Tracking System, Reports to Congress, public hearings, task forces, and DOE Regional Representatives.

D.2.h.(1) Action and Information Memoranda System:* This information management system applies to all materials prepared for submittal to Office of the Secretary of Energy (OSE) Principals. It is intended to assure that information and recommendations submitted to the Principals are "relevant, accurate, objective, timely, and complete." Attainment of these objectives is promoted by the participation of appropriate DOE organizational units in the preparation of submittals. The system recognizes two basic types of documents:

- Action Memoranda: Internal documents which present a course or courses of action which a Secretarial Officer recommends for a decision by an OSE Principal or which will be considered in a meeting with one or more OSE Principal(s). Action Memoranda may also be used to transmit accompanying documents for signature or approval.

*For a further discussion of Action and Information Memoranda, see "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Part III, November, 1978.

- Information Memoranda: Internal documents which present information or data that a Secretarial Officer considers valuable or necessary for use by the OSE but which require no action. Such material may include a response to a request for information, a status report of a program or project, or advance notice of a decision issue. Information Memoranda may be self-contained or may transmit accompanying documents.

D.2.h.(2) Action Coordination and Tracking System (ACTS)*: ACTS is a computerized management information tracking system. Its objective is to provide a neutral, orderly, and anticipatory tracking system for informing the DOE Principals of decisions or major milestones to be met on policy, regulatory, and certain other action assignments and commitments. This system is intended to ensure that all action assignments from or to the OSE Principals which are scheduled for review, clearance, or acknowledgement by any of them are prepared in a comprehensive, coordinated, and timely manner.

The ACTS appears to be potentially useful to EV in promoting consideration of environmental factors in policy-level deliberations.

D.2.h.(3) Reports to Congress*: DOE Interim Management Directive (IMD) 0508, "Monitoring, Coordinating and Transmitting Reports to Congress," establishes a system to ensure that DOE Reports to Congress will be responsive to the requirements of applicable statutes and Congress and that such reports will be reviewed, coordinated, and submitted in a timely manner. A document is considered a Report to Congress if:

- it is required by statute, legislation, or the formal request of a congressional committee, or
- its due date in Congress or frequency (if recurring) is specified either by Congress or by statute.

Neither communications from DOE in response to requests from individual members of Congress nor budget requests are considered Reports to Congress.

*For a further discussion of ACTS and Reports to Congress, see "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Dalton•Dalton•Newport, Part III, November, 1978.

Reports to Congress can often have important environmental implications; they are important to EV because environmental considerations should be involved in their preparation and review.

D.2.h.(4) Public Hearings: Public hearings are legally required in the process of developing and implementing many DOE programs and activities. Since there is no central organizing system or organizational unit for all public hearings, the process is very difficult to track. Normally, the responsible program office organizes the required hearings, selects the participants and the agenda, and organizes the data gathered into recommendations for action or decision.

Public hearings are significant to EV because they frequently involve discussions of impacts--economic, cultural/social, urban, competitive, or environmental. Hearings regarding environmental compliance and impacts are particularly worthy of attention since disagreements can become matters for litigation.

D.2.h.(5) Task Forces: Task force participation requires a considerable investment of effort, but interviewees generally agree that the effort is rewarded. Task forces reputedly get things done in a cooperative and timely manner. Because they are largely unconstrained by bureaucratic procedures and protocol, they fill a gap in the policy/program formulation process which falls somewhere between the National Energy Plan and specific program-level decisions.

Task forces are often created by decision makers (OSE Principals and/or Assistant Secretaries) to gather data, analyze alternatives, and/or make recommendations in three basic areas: 1) policy, 2) program implementation, and 3) program evaluation. These three types of task forces can focus on a particular Secretarial Office or cut across all of DOE. (Interagency task forces are not discussed here.)

Policy-type task forces, by far the most numerous, are usually administered by the Office of Policy and Evaluation (PE). If these task forces affect more than one Secretarial Office, EV can readily track them on ACTS. Program implementation task forces, which generally fall within the scope of a single Secretarial Office, are best tracked through direct liaison with each Secretarial Office, while program evaluation task forces most often directly involve division-level staff. Staff offices which use and participate on task forces most regularly are PE, Resource Applications (RA), Conservation and Solar Applications (CS), and Energy Technology (ET).

D.2.h.(6) Regional Representatives: There are ten DOE Regional Representatives (RRs), one in each federal region. RRs have a double function: they serve both as representatives of the Secretary speaking for the Department and as spokesmen for their individual constituencies. Practically speaking, however, staff limitations often severely constrain their ability to provide programmatic support.

Because of the regional nature of many environmental effects and the variations in environmental situations (both physical and political) among regions, Regional Representatives could be very important to EV in a number of ways. The public relations roles of the Regional Representatives and their physical proximity to consumers, other interest groups, and state and local governments allow them to give visibility to DOE issues of relevance to the region. Conversely, RRs can bring regional issues to the attention of DOE headquarters. The environment, both generally and with regard to specific DOE field actions, has been a major issue area for several Regional Representatives.

To a certain extent, the Regional Representatives can help EV anticipate complex or controversial environmental issues within a region. Often, regional environmental issues are raised in response to DOE or EV actions already taken; in these instances, at least, experiential information should be fed back into the planning of future DOE or EV actions. Although EV has instituted an environmental liaison program with the field, its contact with RRs has been limited.

D.3. Unsatisfied Environmental Planning Requirements and Potentially Responsive Approaches*

Section D.1, above, sets out the array of environmental requirements imposed by NEPA on the Department's policy, program, and project planning activities. Section D.2. surveys the mechanisms through which DOE and EV are now attempting to satisfy those requirements. This section discusses four key areas in which additional effort by EV can significantly strengthen the Department's response to NEPA. Specific suggestions are made for approaches/activities which could satisfy currently unmet environmental planning needs in each of these areas.

D.3.a. Fuller Participation by the Office of Environment in the Development and Review of DOE Policy Guidance and Legislative Initiatives: EV has played only a minor role in the development and review of both DOE budgetary policy guidance and legislative initiatives. While this is not a central role for EV, it does constitute a response to Sections 101 and 102(A) and (B) of NEPA, which require that environmental factors be considered in the policy development process. EV is the only office in DOE with environmental overview as a principal part of its mission. For that reason, EV has a legitimate role in basic Departmental decisions which shape its budget and legislative proposals. Early involvement in these areas will lead not only to better decisions, but also to a more systematic and efficient departmental response to NEPA documentation requirements.

D.3.a.(1) Involvement in the Development of Policy-Level Strategy Papers: The ASEV should assess EV's potential role in the development and/or review of energy resource "strategy papers" currently being prepared by the Office of Policy and Evaluation (PE) in joint venture with selected program offices. While the precise title, form, and content of these documents have not yet been resolved, it is apparent that some intermediate-level policy development mechanism between the National Energy Plan and specific issue analyses is starting to take shape. These strategy papers will contain a statement of policy regarding a particular resource area, a discussion of alternative approaches,

*For a fuller discussion and recommendations on EV's action options, see "Factoring Environmental Considerations into DOE Policy and Program Decision Making: An Analysis of OEV Opportunities and Options," Dalton•Dalton•Newport, April, 1979.

and a recommended course of action. Issues which may be addressed in such a document range from an assessment of regulatory versus technological approaches to an evaluation of specific budget items. These documents will be particularly valuable in the annual spring budget planning sessions with the Office of Management and Budget.

While strategy papers will be only one of a number of inputs in the development of policy guidance, they should provide an important analytical basis for the initial budgetary decision-making process. As such, they represent a significant avenue for policy-level participation by EV. However, meaningful involvement in such a process by EV is not likely to happen without significant advance reconnaissance, planning, and data gathering. Nor is it likely to occur initially over the full spectrum of resource areas. Since this process is still in its formative stages, it would be to EV's advantage to assess in more detail how this process is developing and how EV can most effectively participate.

D.3.a.(2) Increased Involvement in the Development and/or Review of All DOE Legislative Initiatives: EV should develop a formal procedure in coordination with the Office of Policy and Evaluation for participating in the review of all suggested legislative initiatives--including those stemming from the National Energy Plan (NEP). This should result not only in the assurance that environmental concerns have been recognized and addressed, but also that required EISs have been identified early. Regular monitoring of the Action Coordination and Tracking System (ACTS) could also facilitate the identification of new legislative initiatives requiring EV's review.

EV should also devote greater attention to the development of initiatives it proposes for the NEP. None of EV's suggested initiatives for NEP II were included in the Plan. Therefore, it would be prudent for EV to reevaluate its approach and give the preparation of such initiatives a higher priority.

D.3.a.(3) Increased Participation on Policy Task Forces: EV's involvement in informal decision systems, such as task forces, is important to assure that environmental implications are recognized and given due consideration in decision making. Because of the limited scope, multidisciplinary nature, and size of these working groups, environmental issues can be more easily identified and a role for EV can be more readily established.

Although participation on task forces requires a considerable investment of effort, their targeted objectives and their policy/decision-making orientation makes them of prime

importance to EV in influencing the decision process. Therefore, EV should investigate its past role on agency task forces (such as the Commercialization Task Force), including an identification of any significant problems, and devise approaches for increasing its participation. For example, a strategy could include more frequent communication with key policy offices and careful monitoring of ACTS to identify potential task force assignments in which EV could play a participatory or supportive role.

D.3.a.(4) Continued Emphasis on and Development of the Environmental Issues Committee: The Environmental Issues Committee (EIC) already provides an essential forum for the identification and discussion of some types of policy issues among a cross-section of departmental personnel. It is one of the few formalized EV mechanisms which has established extra-EV communication on a large scale.

Two specific suggestions made by DOE personnel for strengthening the EIC merit attention. First, it was suggested that the committee should not only discuss key issues but also make recommendations to key decision makers on courses of action that DOE should take. To facilitate this shift of emphasis, it was recommended that summary materials (fewer than ten pages) be prepared by the EIC support staff and distributed to each participant prior to an EIC meeting. These materials could outline the issues to be discussed, available options, and pros and cons of each option and offer a recommended course of action.

Second, it was noted that the issues discussed by the EIC tend to focus on the impacts of non-DOE-initiated regulations. Since the impacts of DOE-initiated regulations are not now specifically and systematically addressed anywhere within EV (see Section D.3.b. below), the EIC appears to be a logical forum in which to address them.

D.3.b. Involvement of the Office of Environment in the Regulations Development Process: There is presently no formal or regular interface between the regulations development process and the Office of Environment. Interviews with the PE office which administers this process indicate that EV has not participated in any regulations development working groups. Moreover, the void created by EV's lack of involvement has not been filled by any other office. For example, the Division of Environmental Planning and Program Evaluation in PE, which has been expected to deal with environmental issues in most processes administered by that office, has apparently not participated in this process either. This oversight may be due to inadequate definition of the role these units are expected to play in the process, or conflicting views regarding the roles of EV and the PE

Environmental Planning and Program Evaluation Division in participating as environmental representatives in PE-administered processes.

D.3.b.(1) Establishment of Liaison to Regulatory Offices: EV must participate more visibly and more regularly in the NEPA process of regulatory offices. One means for improving the early recognition of environmental issues associated with proposed DOE regulations is through the explicit designation of one or more EV liaisons to establish direct and continuing communication with DOE regulatory offices. Such an EV liaison should be responsible for monitoring ACTS and the DOE regulatory calendar prepared by the regulatory office in PE to announce the development of new DOE regulations. In addition, an EV regulatory liaison should also develop the necessary coordination with PE, GC, and regulatory offices to improve the early identification of environmental issues and subsequent NEPA compliance documentation requirements.

D.3.b.(2) Development of Environmental Analysis Mechanisms for Proposed Regulations: EV has a variety of guidance and support systems for identifying environmental issues, providing environmental data, and scheduling environmental research for technical program areas (e.g., ERDs, EDPs, and PEPs). (See Section D.2.g. of this chapter.) However, no parallel environmental guidance and support system exists for regulatory initiatives. Regulations, unlike technical programs, are not repeatedly reviewed and modified over long periods of time. Thus, a special type of analytic mechanism--as well as a high degree of responsiveness--is essential for EV to effectively participate in the regulations development process.

While the development of a specific analytic approach and document warrants more detailed investigation, the general objective and characteristics of such a mechanism should be similar to those of the Environmental Readiness Document (ERD). A "regulatory ERD" should briefly identify any certain or predictable environmental issues, as well as those types of potential environmental issues which cannot be easily determined or are not apparent. The environmental knowns and unknowns should be assessed in terms of potential environmental risks. "Regulatory ERDs" should also identify any essential research or data gathering which should be conducted prior to implementation of a regulation. Such a mechanism would provide an explicit role for EV in the early identification of critical environmental issues and would be an important means for determining the need for NEPA compliance documentation. The regulations development procedure, as now described in draft DOE Order 2030., would allow for EV participation in this process to some extent.

D.3.c. Extension of the Office of Environment's Involvement in the Energy Technology RD&D Planning Process: As outlined earlier, EV has devoted considerable resources and made significant progress towards the development of an environmental planning process which effectively links the identification of environmental issues and the scheduling and conduct of environmental RD&D with the phased development of emerging energy technologies. While the major components of this process appear to be well designed for their respective tasks, several areas warrant further attention by EV.

D.3.c.(1) Environmental Review of Energy Technology RD&D Below the Major System Threshold: There is no institutionalized system analogous to the Program and Project Management System (PPMS) for reviewing energy system acquisitions which fall below the threshold for designation as "major" energy systems, that is, have an annual cost of \$50 million or a total projected cost of \$200 million. Of approximately 100 energy technology projects now underway, only 18 have been categorized as major system acquisitions (MSAs). The remaining projects--some with potentially significant environmental consequences--do not qualify as MSAs and, therefore, are not subject to review by the Energy System Acquisition Advisory Board (ESAAB). In these cases, the Assistant Secretary with the prime responsibility for project implementation performs the decisional role fulfilled by the ESAAB for MSAs. Although EV is scheduled to prepare Project Environmental Plans (PEPs) for these projects, this planning and documentation role falls short of the full participation provided under the PPMS process.

The ASEV should work with the Under Secretary and others, as appropriate, to hasten the development of an institutionalized management system for such projects. This system may be similar to PPMS, but should not be dominated by the program office at the expense of excluding appropriate opportunities for environmental analysis and evaluation.

D.3.c.(2) Environmental Review of Projects in Phases One Through Three of PPMS: PPMS fails to explicitly address the environmental review requirements of the technology-base activities (phases one through three: basic research, applied research, and exploratory development). These requirements should include a case-by-case environmental review of each research project and/or a generic environmental review of the kind of research carried out by a given facility. This review would determine only the direct impacts of the research and would not include the potential impacts of technologies subsequently developed based on the research. At these early stages of investigation, attempts to analyze the environmental impacts of applying the research

would be too speculative to provide a basis for decision making. This minimal review should be performed according to guidance provided by EV and may be documented by a Preliminary Environmental Checklist (PEC). (See Section D.3.d.(2) of this chapter for a discussion of PECs.) This review should identify those research projects requiring further environmental review.

D.3.c.(3) Increased Program Office Involvement in the Preparation of Project Environmental Plans (PEPs): Project Environmental Plans (PEPs, previously called Environmental Annexes), are being prepared by EV independently of the technical project plans (ESAPPs) prepared by the program offices. The separation of the PEP - both physically from the body of the overall Energy System Acquisition Project Plan (ESAPP) and in terms of its independent preparation by EV - is not considered advantageous from the perspective of integrating environmental issues into the thought processes of line managers and policy makers.

Inter-office working groups under the Environmental Coordinating Committee (ECC) provide an existing and effective mechanism for improving this situation. ECC working groups preparing future PEPs should be required to include a cross-section of non-EV program specialists in addition to EV's technical staff. While in theory ECC working groups should already be composed of a cross-section of DOE personnel, the initial PEPs were prepared primarily by EV staff and later "attached" to the ESAPP.

D.3.d. Remedying the Uneven Level of Compliance in NEPA Documentation: As previously discussed, EV has an appropriate and critically important role to play in DOE's decision processes, whether or not Section 102(2)(C) documentation is ultimately required. However, because other elements of the Department most frequently, and sometimes exclusively, perceive EV's NEPA mission in terms of environmental documentation responsibilities, the importance of an orderly approach to the production of EAs/EISs cannot be overstressed. Therefore, this section addresses basic documentation problems endemic to DOE and proposes remedies through which EV could achieve systemic improvements.

The main purpose of environmental compliance documents is to provide well-analyzed environmental data for use in agency decision making. If no document, or the wrong kind of document, is produced, the agency is not likely to successfully or efficiently achieve this purpose.

For some DOE actions, no NEPA document of any kind has been produced, even when the probability of significant environmental effects has been high. In other instances, the wrong

kind of document has been written. These difficulties stem from several causes. Foremost has been inadequate guidance to the responsible officials about how to determine when and what type of document is needed.* Secondly, in some units of DOE a basic environmental consciousness is missing. Many people in DOE are unfamiliar with NEPA and related environmental requirements (other than having a vague recognition that an EA or EIS may be needed to complete the administrative record of a program or project). Because they have had little experience with planning and preparing NEPA documents, they fail to see the utility of the NEPA documentation process when properly executed. Such people often tend to resist what appear to be burdensome NEPA documentation requirements.

A third cause of compliance problems in some program offices (including their field components) is insufficient allocation of time and monies to permit preparation of the required level of environmental documentation. This may result in a less detailed document or none at all. On the other hand, some offices have "over-complied" by preparing EISs when EAs were sufficient.

Several mechanisms or procedures for remedying problems which result in an uneven level of document-related NEPA compliance are discussed below.

D.3.d.(1) Application of Initial Criteria of Environmental Effects and Categorization of DOE Programs and Activities**: One of the objectives of the NMS is to identify those classes of DOE actions which normally lack the potential for creating significant environmental impacts. Once identified, these classes can be categorically excluded

*Any appraisal of the status of NEPA compliance documentation agency-wide in DOE must recognize the Department's complex origins. Section 705 of the DOE Organization Act authorized those organizations transferred to DOE to continue to operate under the regulations in effect on October 1, 1977 (the date of Department activation set by executive order) until these could be revoked, modified, or superceded by DOE's own regulations. These regulations, of course, include those governing the implementation of NEPA. To date, DOE has not promulgated either its final NEPA regulations or a comprehensive set of guidance. It has been inhibited from doing so primarily by uncertainties about how to comply with the regulations on the implementation of NEPA which CEQ is in the process of issuing.

**For a more detailed discussion, see Appendix A.

from NEPA review, with a significant savings of agency resources. Staff resources can also be conserved by identifying other classes of actions which normally would require either an EIS or an EA. For these "categorically included" classes, NEPA compliance should begin with the appropriate level of document without wasted effort on preliminary review. Such preliminary review is appropriate for all other classes of action, i.e., those which are neither categorically excluded nor categorically included.

To identify those actions subject to NEPA review, Dalton•Dalton•Newport established a list of the types of environmental effects that may be produced by agency programs or activities. These effects are referred to as the Initial Criteria of Environmental Effects because they are to be used in the first-level environmental review to determine the need for further, more detailed environmental review. In developing the Initial Criteria, a large number of existing environmental laws, regulations, and executive orders were reviewed to provide full coverage of requirements and to minimize the chance of an oversight.

If a program or an activity meets one or more of the Initial Criteria, there is at least the potential for environmental impact and the need for some form (unspecified) of environmental analysis which the Initial Criteria themselves do not provide. Such a program or activity is classified as NEPA non-exempt. If no Initial Criteria are met, the program or activity can be considered NEPA-exempt, requiring no further environmental review.*

The Initial Criteria are composed of two major groups: natural systems (e.g., air, water, and biota) and socioeconomic systems (e.g., housing, land use, historic features, and social interactions). Congruent with the CEQ NEPA regulations, meeting an Initial Criterion for socioeconomic systems is not sufficient in itself to trigger further environmental review. However, the socioeconomic criteria can suggest indirect or secondary natural systems effects which do require further environmental review.

Dalton•Dalton•Newport conducted a detailed inventory of DOE programs and activities to help establish the NEPA-exempt and non-exempt categories. The full inventory of DOE actions was reduced to major categories, and the Initial Criteria were explicitly applied to divide these categories

*For more detail and the specific criteria, see NMS Working Paper No. I-2, "Initial Criteria of Environmental Effects."

into NEPA-exempt and NEPA non-exempt activities. Classes of action which are NEPA-exempt (categorically excluded) are those activities which can have no direct controlling influence on the nature, magnitude, or occurrence of any potential environmental impacts stemming from DOE actions.

The remaining classes of actions are those needing NEPA review. Each of these classes has three possible subclasses:

- Actions that normally require an EIS
- Actions that normally require an EA to determine the need for an EIS
- Actions that normally require a preliminary environmental review to determine the need for an EA or EIS. This review involves comparison of the possible effects of the proposed action with the Initial Criteria of Environmental Effects.

Criteria are also needed to distinguish among these three subclasses. As developed by the NMS project, an EIS would normally be required for any activity which:

- has a statutory requirement for an EIS,
- must follow a schedule which does not allow sufficient time for preliminary environmental review and/or an EA and is likely to require an EIS in any case, or
- is of such a nature and/or magnitude that the probability of significant environmental impact may be presumed. Significance is to be determined using criteria listed in Section 1508.27 of the CEQ regulations on NEPA and the experience of DOE and its predecessor agencies in attempting to comply with NEPA.

An EA would normally be required for any activity which:

- has to meet an environmental review and coordination requirement which is tantamount to an EA under some other environmental law or regulation or DOE directive (e.g., "Site Selection"),
- must follow a schedule which does not allow sufficient time for preliminary environmental review and is likely to require an EA in any case, or
- is of such a nature and/or magnitude that the probability of significant environmental impact is high. Again, significance is to be determined

using criteria listed in Section 1508.27 of the CEQ regulations on NEPA.

Applying these criteria to the current inventory of DOE activities produces lists of actions that normally require EAs or EISs. These lists are currently being developed.

As proposed, the NMS recommends that program offices compare their activities with these lists to determine the need for an EA or an EIS. If an activity is not identified as requiring an EA or EIS and has not been categorically excluded, or if it normally requires a preliminary environmental review, it must undergo review to determine on an individual basis the need for any environmental documentation. Such a review is also required for those activities which normally require no environmental documentation, but which DOE feels may be an exception to the rule for some reason. The environmental review referred to here is further discussed in (2) below.

The development of Initial Criteria, identification of NEPA-exempt and non-exempt classes of actions, and establishment of criteria for determining the appropriate form of NEPA compliance documentation are basic components of the NMS Conceptual Framework. They are designed to facilitate the smooth functioning of the NEPA compliance documentation part of the NMS, eliminate the preparation of unnecessary documents, ensure an adequate environmental evaluation of every DOE activity, and promote an even level of compliance in DOE. As DOE's basic tools for determining what is environmentally sensitive, they are essential to factoring environmental considerations into DOE decision making.

D.3.d.(2) Use of Preliminary Environmental Reviews and Checklists: A Preliminary Environmental Review (PER) should be conducted whenever an individual review of an action is necessary to determine whether an EA or EIS is required. The instrument suggested to be used in the PER is a Preliminary Environmental Checklist (PEC).

PECs would be based on the relevant Initial Criteria and would be tailored to the nature of particular programs. Each program or group of similar programs would have its own PEC which addresses only those Initial Criteria relevant to its component activities. This would permit a rapid, efficient, and uniform review of the proposed action to determine whether, in fact, it meets any of the criteria and has the potential for causing significant environmental impact. If the answer to either is negative, no further environmental review would be required. By completing and signing the PEC, the reviewing officer in the program office would satisfy Section 1021.11 of DOE's draft NEPA regulations, which states that "a brief memorandum may be prepared which

explains the basis for the determination that the activity is clearly not a major Federal action significantly affecting the human environment." The PEC would then accompany the proposal through the agency's review process. Whenever it is unclear whether the proposed action would have significant environmental impact, however, the reviewing officer would have to opt for preparation of an EA. In general, PECs would help to eliminate errors in determining required documentation.

D.3.d.(3) Tiering of Documents: Different types of NEPA compliance documents are associated with different levels of DOE activity. The CEQ regulations state that "agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review" (Section 1502.30).

The NMS recognizes three levels of activity in DOE: the policy level, the program level, and the project level. NEPA case law and the CEQ regulations on NEPA make it quite clear that evaluation of the potential environmental effects of agency actions must begin at the earliest feasible time and must comprehensively examine the effects of both the proposed action and alternatives to it. This evaluation is to continue as program/project definition and planning proceed from the general to the specific.

At the policy level, the alternatives under consideration are extremely broad, e.g., the choice between emphasizing solar energy instead of fossil energy, or vice versa. At the program level, the choice is among alternative strategies that respond to the directions established at the policy level. At the project level, the alternatives are much narrower, limited to such factors as an alternative design or site. The hierarchy of policy-level, program-level, and project-level activities is suggested in Figure IV-13.

It is essential that the agency consider the potential environmental effects of its policy options even though the occurrence of such effects is often speculative and their exact locus may be unknown. While such evaluations may be somewhat general, their primary effect on decision makers is likely to be a dedication of resources to further research into potential environmental effects. As these data become available and programs are better defined, it may be necessary to reconsider policy decisions in light of their newly revealed environmental implications. Program-level actions which implement the agency's fundamental policies are generally sufficiently well defined to allow greater specificity in environmental evaluation than those at the policy

Figure IV-13 A Typical Hierarchy of Policy, Programs, and Projects in DOE Technology RD&D

Dalton • Dalton • Newport
April, 1979

level. However, the greatest specificity will be possible only at the project level.

Corresponding to the three levels of activity in DOE, the NMS recognizes three levels of NEPA documents:

- Policy EISS: Policy EISS address such activities as the National Energy Plan and legislative proposals.
- Program EISS: Program EISS address such items as Technology Program Plans, Energy System Acquisition Project Plans, certain budget proposals, development of regulations for loan guarantee programs, financial assistance programs, licensing and permitting programs, other economic regulatory programs, and other program planning activities. The terms "Program EIS" and "Generic EIS" are essentially synonymous. Program EISS also include documentation for new or existing facilities engaging in multiple programs, e.g.:
 - Institutional EISS
 - Role EISS
 - Omnibus EISS
- Project EISS: Project EISS address the impacts of specific RD&D projects, loan guarantee approvals, financial assistance approvals, license or permit approvals, etc. Project EISS also address the impacts of site-specific actions not included above.

Distinguishing between a policy- or program-level action on the one hand and a program- or project-level action on the other is difficult. The term "program," in particular, is used very broadly in DOE (e.g., fossil energy program, coal program, coal gasification program, high-Btu coal gasification program). For the purposes of the NMS, a more precise nomenclature is desirable. Therefore, the following terms and definitions have been developed. Primarily, these definitions distinguish among the types of decision to be made and the kinds of alternatives that will be foreclosed.

- Policy-Level Decisions: The options at this level are very broad. Because decisions made at this level produce the first foreclosure of alternatives they tend to be political as well as technical in nature. These decisions involve identifying and prioritizing national energy needs and

determining the relative emphasis to be placed on developing particular energy resources for particular needs and on conserving energy by increasing the efficiency of its usage and reducing demand.

- Program-Level Decisions: These decisions tend to be more technically than politically based. They involve selecting the most promising technological and/or regulatory approaches to achieve the goals developed at the policy level. By DOE's definition, a "program is a set of related activities which continue over a period of time, of significant scope designed to achieve clear, mission-oriented, time-phased goals and objectives, or increase knowledge in an area of science or engineering" (Under Secretary Dale Myers' memo, January 22, 1979). These decisions restrict alternatives of lesser scope than those foreclosed at the policy level.
- Project-Level Decisions: The Under Secretary's memo also defines a project as "a unique major effort within a program which has firmly scheduled beginning, intermediate, and ending date milestones, prescribed performance requirements, prescribed costs, and close management, planning and control. A project is a basic building block in relation to a program which is individually planned, approved, and managed. A project is not constrained to any specific element of the budget structure, e.g., operating or capital. It can contain research and development elements, and may or may not require construction."

The above definitions are helpful, but they do not entirely clarify when crucial decisions are made and when NEPA documents may be required. Figure IV-13 shows at least four levels of technology RD&D "programs." The decisions to be made at the higher program levels, however, tend to better fit our definition of policy than of program.

Level 6 in Figure IV-13 represents the project level. All the activities described by a given Energy System Acquisition Project Plan (ESAPP)* are considered by DOE to be part of a single project, even though multiple phases and facilities may be contemplated, as suggested by 6a through 6d. An ESAPP is, by name, a project plan. However, the nature of the ESAPP, at least the initial ESAPP, more

*ESAPPs and the system of which they are a part are described in Section C.2.b.(1) of this chapter.

closely fits the definition of a program. It is reasonable, therefore, to consider any EIS produced to assist the decision at Key Phase Transition Decision Point 1 in DOE's Program and Project Management System (PPMS) to be a program EIS. Subsequent, site-specific documents, if required, would be project EISs.

The NMS conceptual design does not attempt to prescribe exactly where in the technology RD&D process program EISs should be produced. There should be some flexibility for each program office to accommodate its own particular characteristics. What is important is to keep the focus on the nature of the decision to be made and the alternatives to be foreclosed.

Application of the tiering concept to programs not related to technology RD&D is essentially the same, but it does not seem to present the same difficulties. This conclusion may be naive, however, since the planning systems relating to other groups of programs are less well developed and not so complex.

D.4. Summary of Mechanisms for Meeting Environmental Requirements

A variety of existing or potential mechanisms is available to meet the requirements of the environmental planning part of the NMS. These mechanisms can be grouped into two general categories:

- Mechanisms designed to provide an early evaluation of the potential environmental impacts generated by proposed actions and their alternatives
- Mechanisms designed to formally comply with the documentation requirements of Section 102(2)(C) of NEPA.

Figure IV-14 illustrates the DOE policy and program/project planning process and indicates where environmental considerations should be factored into the decision-making process and when NEPA compliance documents are required.

The most impressive array of existing environmental planning mechanisms deals with technology RD&D programs and projects. These include such analytical documents as the Environmental Readiness Document, such planning and scheduling mechanisms as the Environmental Development Plan and the Project Environmental Plan, and such coordinating mechanisms as the Environmental Coordinating Committee (ECC). (All but the ECC are summarized in Table IV-1.) The environmental requirements of financial assistance programs/projects are usually dealt with through the procurement process, which should contain stipulations that the appropriate environmental evaluation and documentation be completed prior to the expenditure of funds. The environmental mechanisms associated with other planning processes (e.g., regulations development) are far less well developed.

In these cases, EV should act promptly to: 1) provide input to the evolution of the process itself, and 2) establish working interfaces between process administrators and EV staff.

Key :

- ◆ EA or EIS May be Needed Before Decision
- ▲ Preliminary Environmental Analysis Needed for Specific Actions Under Consideration
- △ Process Should Include General Environmental Requirements for Future Actions

Table IV-1 Summary of Principal Environmental Planning Documents for the DOE NEPA Management System

Type of Document	Purpose	Primary User	Contents	Prepared by	Review and Concurrence by
Environmental Readiness Document (ERD)	<p>Provide critical review and report on research results; analyze status of environmental concerns; evaluate readiness of the technology to move into the next phase of system development.</p> <p>Assess significance and priority of environmental concerns to be covered in an EDP.</p> <p>Provide assessment for use by ASEV in advising other DOE decision makers and the Energy Systems Acquisition Advisory Board of the environmental readiness of the energy technology.</p>	Assistant Secretary for Environment.	Description of technology; analysis of significant environmental concerns and risks, uncertainties, control technology status, estimated costs and risks of delay in case of adverse findings.	EV staff with consultation from technical programs.	Internal DOE, EPA, and other concerned agencies and interest groups; concurrence by ASEV.
Environmental Development Plan (EDP)	<p>As a program environmental plan, identify general research and development requirements and correlate them to unresolved environmental concerns.</p> <p>Link requirements of relevant environment, health, and safety programs to the development stages of the energy system.</p> <p>Provide the framework for more detailed environmental R&D planning at the project (PEP) and task level.</p>	Research program managers in Offices of Environment, Energy Technology, Conservation and Solar Applications, and Resource Applications.	Summary assessment of concern status and risks; prioritization of concerns; definition of R&D needs, milestone schedules, general implementation strategy, resources and responsibilities.	Environmental Coordinating Committee subcommittees.	Internal DOE, EPA, and other concerned agencies; concurrence by ASEV and cognizant AS for program.
Project Environmental Plan (PEP)	<p>For projects selectively defined by criteria set by Under Secretary, identify key environmental project objectives, tasks, schedules, and costs.</p> <p>Facilitate tracking the progress of a project and the resolution of environmental problems or concerns.</p>	Under Secretary, DOE; research project managers.	State of project environmental objectives; key research tasks, correlated with environmental and technical milestones; budgeted outlays and uncertainties.	Environmental Coordinating Committee subcommittees.	EV and technical program office; concurrence by technical project manager.

**E. Environmental Compliance
Documentation Part of the
NEPA Management System**

E. ENVIRONMENTAL COMPLIANCE DOCUMENTATION PART OF THE NEPA
MANAGEMENT SYSTEM

IV-68

1. Requirements of the Environmental Compliance Documentation Part
 - a. Program Office Functions
 - (1) Initial Determination on the Requirement for a NEPA Document
 - (2) Document Planning
 - (3) Coordination with Other Governmental Agencies
 - (4) Collection of Environmental Data
 - (5) Public Participation
 - (6) Data Analysis
 - (7) Document Preparation
 - (8) Identification of Mitigation and Monitoring Needs
 - (9) Selection of Preferred Alternative and Documentation of Decision
 - b. Office of Environment Functions
 - (1) Establishment of Agency Action Categories
 - (2) Concurrence in the Determination of Whether a Particular Action Requires NEPA Documentation
 - (3) Development of Documentation Procedures
 - (4) Provision of Procedural and Substantive Guidance and Training
 - (5) Document Review and Concurrence
 - c. Functions of Other Offices
 - (1) Office of the General Counsel
 - (2) Functions Not Restricted to a Single Secretarial Office
 - (a) Provision of Supporting Data and Analysis
 - (b) Document Review
 - d. Functional Summary
2. Existing Mechanisms for Meeting Environmental Requirements
 - a. Primary NEPA Compliance Documents
 - (1) Memo to the File
 - (2) Environmental Assessment
 - (3) Negative Determination or Declaration
 - (4) Environmental Impact Statement
 - b. Federal Register Notices
 - (1) Notice of Intent
 - (2) Notice of Availability
 - (3) Notice of Public Meeting
 - c. NEPA Regulations and Guidance Used by DOE
 - (1) ERDA Regulations and Guidance
 - (2) FEA Regulations
 - (3) DOE Orders and Guidance
 - d. EIS Implementation Plans
 - e. Environmental Reports
 - f. Use of Contractors to Prepare NEPA Documents
 - g. Document Review and Concurrence
3. Unsatisfied Environmental Documentation Requirements and Potentially Responsive Approaches
 - a. Remedying the Uneven Level of Compliance in NEPA Documentation
 - b. Improvement in Document Quality
 - (1) Combining the EIS Scoping Process with EIS Implementation Plans
 - (2) Preparation of Environmental Assessment Implementation Plans
 - (3) Increased Use of Applicant-supplied Data and Independent Verification
 - (4) Ready Access to NEPA Support Contractors
 - (5) Use of Skilled Writers
 - (6) Development of Mitigation and Monitoring Plans
 - (7) Improved Guidance and Training
 - c. Improvement of the Document Review Process
 - (1) Production of Better Draft Documents
 - (2) Document Review Planning
 - (3) Better Definition of NAD/EV Roles and Procedures for Document Review
 - (4) Guidance to In-house Reviewers
 - (5) Instructions to Document Revisers
 - (6) Feedback to Reviewers
 - (7) Document Tracking
 - (8) Protection of the Integrity of EV's Review Role
 - (9) Preparation of Record of Decision
 - d. Clarification of NEPA Document-Related Roles and Responsibilities
4. Summary of Mechanisms for Meeting Environmental Compliance Documentation Requirements
 - a. Summary of NEPA Compliance Documents
 - b. Compliance Document Sequencing
 - c. Variation in Compliance Documentation as a Function of Action Type
 - d. Guidance

IV-68
IV-68
IV-68
IV-72
IV-74
IV-75
IV-77
IV-77
IV-78
IV-78
IV-79
IV-80
IV-80
IV-81
IV-82
IV-82
IV-83
IV-90
IV-95
IV-99
IV-99
IV-105
IV-105
IV-109

E. ENVIRONMENTAL COMPLIANCE DOCUMENTATION PART OF THE NEPA MANAGEMENT SYSTEM

Like the first part of the NMS, environmental planning, the second part treats a group of basic NEPA system functions. The focus here is on the full spectrum of activities which relate to documentation requirements. Based upon the requirements of Section 102(2)(C) of NEPA, the main objectives of the documentation part of the NMS are to identify and assess any significant adverse environmental impacts of proposed DOE actions and to specify mitigation measures. Apart from its intrinsic value as a discovery process, the requirement to document both impact and mitigation information is intended to inform and improve departmental decision making.

This section briefly describes the functions of the compliance documentation part of the NMS and presents existing or potential mechanisms to meet these requirements. In some cases, the NEPA system currently operating at DOE already provides mechanisms which satisfy certain of CEQ's NEPA compliance documentation requirements. In other cases, it has been necessary to identify and develop new tools responsive to additional needs.

E.1. Requirements of the Environmental Compliance Documentation Part

Because NEPA compliance responsibility should be distributed throughout the agency, this part of the NMS emphasizes participation by the following offices or groups of offices in performing the basic functions related to producing environmental compliance documentation: the program office responsible for both the proposed action and any compliance documentation required for it; the Office of Environment (EV); and certain other DOE offices which may have supporting roles. A discussion of the distribution of functions among these three groups follows.

E.1.a. Program Office Functions:

E.1.a.(1) Initial Determination on the Requirement for a NEPA Document: Program offices should have available a prescribed set of procedures for making an early, preliminary determination about the need to prepare a NEPA document for a given action or activity. While this judgement is concerned with the production of a formal, written analysis, it is also central to planning for the other environmental requirements of an action. As such, it is discussed in Section D.3.c. of this chapter.

E.1.a.(2) Document Planning: Once the need for NEPA documentation has been established, a process for planning the preparation, review, and distribution of the document is necessary. For EISS, CEQ requires that this process include: public involvement in the document planning; participation by those federal, state, and local agencies and Indian tribes directly affected; determination of a lead agency if more than one federal agency is involved; scoping of the document and the range of alternatives to be considered; scheduling of the document; allocation of assignments for document preparation; and analysis of requirements to coordinate the review of the proposed document with other agencies. For the documentation process to function smoothly, EIS planning requirements should also include: identification of any permits and licenses required throughout the life of the activity, allocation of assignments for intra- and inter-agency reviews, arrangements for public participation in document review, and close coordination between the program office and EV. The result should be a clear understanding between EV and the program office about what information the document will contain and the process for its review.

If an EA is required, the planning process, while similar, may not require as much inter-agency coordination and review or public involvement. However, EV's early involvement in planning for an EA is no less important.

E.1.a.(3) Coordination with Other Governmental Agencies: The CEQ NEPA regulations also require that an EIS list all federal authorizations required for an activity. Thus far, CEQ has identified 89 federal laws and regulations requiring specific permits, licenses, and/or coordination. There is a very high probability that more exist.

In addition to federal coordination requirements, a vast array of state and local stipulations should be reviewed to determine their relevance to any DOE action. The universe of environmental requirements, permits, licenses, and other types of coordination is so immense and changes so rapidly that some mechanism for readily providing this information must be made available. This mechanism should provide both program offices and EV with a complete and current set of requirements pertinent to any particular activity. The identification of coordination requirements should be included not only in the EIS, but also in the document planning process.

E.1.a.(4) Collection of Environmental Data: Thorough collection of environmental data is necessary to prepare a comprehensive document. Two types of data requirements may be distinguished. One type can be anticipated well in

advance of the documentation process, allowing DOE to plan, schedule, and conduct appropriate environmental research either as a program office or an EV responsibility. However, a second type of data must be collected as part of the documentation process. Just as preparation of environmental compliance documents is the function of the program office, this type of data collection is also a program office responsibility. Although program offices can require proposers or applicants to submit part or all of the information needed for the documentation process, the CEQ regulations on NEPA specify that DOE is responsible for the data's accuracy.

CEQ also requires a clear admission in the document of data gaps. Whenever the information missing is necessary for the decision maker to make an informed choice, DOE must acquire the data if they exist and the acquisition costs are not prohibitive. If they cannot be obtained, the agency must compare the need for the activity against the risks of uncertainty. If the agency decides this need outweighs the risks, a worst-case analysis must be discussed in the document, including the probability of its occurrence.

E.1.a.(5) Public Participation: One of the main objectives of NEPA is to involve the public in federal agency decision making to the most reasonable extent. Given the complexity and diversity of environmental systems throughout the United States and other parts of the world in which DOE may be involved, public input is one way to obtain a wider information base on which to draw for compliance documentation purposes.

Toward this end, the CEQ NEPA regulations require the invitation of public participation at specific points in the NEPA process and encourage it whenever else it might be advantageous. Provision for public involvement is mandatory in the document planning process and during document review. If sufficient public interest exists, public hearings should also be held while the document is available for comment.

Every reasonable attempt should be made to elicit public comments and to address them in the final document delivered to the decision maker. To ensure adequate departmental response, procedures should be available for organizing the collection of, and responses to, public comments.

E.1.a.(6) Data Analysis: The keystone of a successful documentation effort--that is, one which really facilitates decision making--is in its analysis of the data available. As part of its preparation function, the program office must be able to review, select, and apply acceptable methodologies for analyzing environmental information. The CEQ NEPA regulations require the agency to be responsible for any

methodologies used in compliance documentation and to explicitly identify them in EISSs.

E.1.a.(7) Document Preparation: Section 1500.4 of CEQ's NEPA regulations, "Reducing Paperwork," describes a number of objectives to improve NEPA document preparation. These include:

- Reducing the length of EISSs (e.g., by setting appropriate page limits)
- Preparing analytic rather than encyclopedic EISSs
- Emphasizing the discussion of significant issues
- Writing EISSs in plain language.

These objectives and others strongly suggest an urgent need for guidance from EV to the program offices on a uniform, agency-wide approach to their fulfillment.

The program office has primary responsibility for a document's scientific and editorial acceptability. No reviewer outside the program office should feel compelled to make extensive editorial revisions to a document. Therefore, before releasing a document for review, the program office should examine and approve it for content, form, and language.

Failure to deal effectively with these latter two considerations at the program office level often causes downstream inefficiencies with document flow. Poorly organized and badly written documents frequently delay their review and approval. Quite apart from the treatment of substantive issues, an editorially unacceptable document may have to be returned to the originating office for redrafting. The best interests of both the program office and EV are served by reasonable attention to the fundamentals of grammar and prose style.

Interdisciplinary preparation is required by CEQ to ensure comprehensive and integrated compliance documents. CEQ permits agencies to use appropriate third-party contractors to help prepare environmental documents, and use of such contractors usually increases the range of relevant disciplines contributing to document preparation.

E.1.a.(8) Identification of Mitigation and Monitoring Needs: CEQ requires that an EIS identify means to mitigate adverse environmental impacts. Specifically, a summary of a detailed program to mitigate the impacts of the selected alternative and/or monitor its effects on the environment must be included in the agency's Record of Decision.

A discussion of mitigation and monitoring is not appropriate in all types of EISs. The utility of such a discussion, and the necessity for it, increase with the specificity of the activity. Mitigation and monitoring plans should be required for virtually every site-specific project with environmental impacts, almost never for policy EISs, and usually not for program EISs.

E.1.a.(9) Selection of Preferred Alternative and Documentation of Decision: From an objective discussion of all reasonable alternatives*, the program office must identify those alternatives which are considered environmentally preferable, according to Section 1505.2 of the CEQ NEPA regulations. If the environmentally preferable alternative is not chosen, the program office must specify what overriding considerations of national policy necessitated the choice of another alternative. This information is to be documented in a Record of Decision and distributed to the public.

The essential objective of the requirement for full discussion of alternatives and a documented decision is to avoid foreclosing reasonable options before an EIS is made available. Prior to completion of any needed EIS and a Record of Decision, only supporting activities that will not determine subsequent development, limit alternatives, or have an adverse environmental effect are allowable under Section 1506.1 of the CEQ NEPA regulations.

E.1.b. Office of Environment Functions:

E.1.b.(1) Establishment of Agency Action Categories: To make the NEPA process more efficient, CEQ requires agencies to determine those classes of action that normally require no environmental documentation, those that normally require EISs, and those that normally require some type of review to ascertain what, if any, documentation is needed. This classification of agency actions is an appropriate EV function for two reasons:

- DOE Order 5440.1, "Implementation of NEPA," gives ASEV the responsibility for identifying DOE actions that may require environmental review under NEPA; and
- ASEV concurs in the determination of need for an environmental document.

*Identification and analysis of alternatives is part of the environmental planning part of the NMS. See Section D.1. of this chapter.

Since this function is concerned with document need, it is more a planning than a documentation activity. For that reason, the establishment of classes of actions is discussed more fully in Section D.3.d.(1) of this chapter.

E.1.b.(2) Concurrence in the Determination of Whether a Particular Action Requires NEPA Documentation: Like the previous function, concurrence in the determination of document need is one that cross-cuts both the planning and documentation parts of the NMS. Determination of document need should be part of the environmental planning process whenever possible. EV concurrence is implicit in the document need determination aspects of the planning process. (See Section D.2.g. of this chapter for an expanded description of this function.)

E.1.b.(3) Development of Documentation Procedures: To function smoothly, the documentation part of the NMS requires a comprehensive process for writing, reviewing, approving, publishing, and distributing environmental documents. According to DOE Order 5440.1, it is the function of the ASEV or a designee to ensure that procedures are established to successfully accomplish these tasks. These procedures must coordinate the writing of a document with the subsequent steps of document review and approval. Most importantly, they must support the purpose of NEPA documentation: the inclusion of environmental information and considerations in DOE decision making.

E.1.b.(4) Provision of Procedural and Substantive Guidance and Training: DOE Order 5440.1 specifically requires EV to provide technical assistance and guidance to DOE offices in their preparation of NEPA documents. This guidance must be comprehensive, yet detailed enough to assist highly diversified program offices in carrying out their particular environmental documentation functions.

E.1.b.(5) Document Review and Concurrence: After the program office prepares and reviews its environmental document, it must present the document for further in-house review and approval. This additional review is necessary to assure that the document was competently prepared in full compliance with the requirements of NEPA and to identify any needed improvements or additions. DOE Order 5440.1 assigns the review coordination and concurrence responsibilities to EV, specifically to the NEPA Affairs Division.

Part of EV's review function is to distribute environmental documents within DOE, collect comments from reviewers of the documents, and relay these comments with revision instructions to the responsible program office. In addition, EV should provide feedback and, ultimately, revised

documents to the reviewers to demonstrate consideration of their comments.

Internal DOE reviews should be concise and substantive. Editorial acceptability is the responsibility of the program office and should be only of minor concern to EV. Documents with major editorial deficiencies can be returned to the program office for changes before EV continues its review.

E.1.c. Functions of Other Offices:

E.1.c.(1) Office of the General Counsel: According to DOE Order 5440.1 (Section 5d), the Office of General Counsel has four specific advisory functions related to NEPA compliance:

- To consult with the ASEV as to whether a proposed action requires an EA, EIS, or neither;
- To consult with the ASEV regarding the legal adequacy of all DOE NEPA documents;
- To consult with the ASEV as to whether a public hearing concerning the NEPA-related aspects of a proposed action should be held; and
- To provide legal assistance to all DOE offices in the preparation of NEPA documents and the conduct of NEPA-related hearings.

E.1.c.(2) Functions Not Restricted to a Single Secretarial Office:

E.1.c.(2)(a) Provision of Supporting Data and Analysis: A number of DOE offices collect and analyze data related to energy supply, demand, prices, and technologies. Among them are the Offices of Policy and Evaluation, International Affairs, Intergovernmental and Institutional Relations, and the Energy Information Administration. They provide this information to other DOE offices for use in a variety of ways, including the preparation of environmental compliance documentation.

In addition to supplying valuable data, DOE offices other than EV and the responsible program office sometimes are required to assist in the preparation of DOE environmental documents. Such multiple authorship, properly coordinated, can contribute to meeting NEPA's requirement for interdisciplinary perspectives in the analysis of alternatives and strongly support efforts to provide multiple inputs to improve decision making.

E.1.c.(2)(b) Document Review: Other DOE offices also participate in the documentation part of the NMS through in-house reviews of environmental documents. This very important task helps ensure a comprehensive, interdisciplinary, and accurate document. While time-consuming for the reviewer, this responsibility should be recognized as significant in terms of protecting the agency's interests.

E.1.d. Functional Summary: Documentation is the most concrete and visible manifestation of NEPA. The authors of the National Environmental Policy Act of 1969 fully intended that EISs would provide the "action-forcing" mechanism needed to put the policy of protecting and enhancing the quality of the environment into practice. However, mere preparation of a document does not ensure genuine consideration of impacts in agency decisions. The first-rate planning, detailed guidance, sound data analysis, and perceptive critiques which produce a high-quality document are useless if the decision process cannot or will not accommodate environmental input. The best-intentioned decision maker can make decisions only as good as the information available.

The NEPA compliance documentation part of the NMS identifies a variety of functions to be performed by various DOE offices in producing NEPA documents. Figure IV-15 summarizes their distribution among the responsible program office, the Office of Environment, and other DOE offices. This figure is an elaboration of Box (5) of Figure IV-1. Mechanisms for accomplishing these functions are discussed below.

Figure IV-15 Environmental Compliance Documentation Part of the NMS Conceptual Framework

Dalton • Dalton • Newport
April, 1979

E.2. Existing Mechanisms for Meeting Environmental Requirements

Many of DOE's existing mechanisms for meeting environmental documentation requirements conform to the procedures stipulated in the 1973 CEQ guidelines on NEPA. Others have evolved from the NEPA practices of DOE's predecessor agencies. Both types of mechanisms are discussed below.

E.2.a. Primary NEPA Compliance Documents: The four most important types of existing NEPA compliance documents are: memos to the file, environmental assessments, negative determinations or declarations, and environmental impact statements. These documents either contain key determinations or are used to make such determinations in the NEPA compliance documentation part of the NMS.

E.2.a.(1) Memo to the File: This memorandum is written by the program office to certify that an action has been reviewed and determined to have no potential for significant environmental impacts. Such a memo is the product of the initial preliminary review of the action and must include the basis for the determination. A memo to the file is prepared only when it is clear that an action is not a major federal action significantly affecting the quality of the human environment.

E.2.a.(2) Environmental Assessment (EA): An EA forecasts and assesses the extent of foreseeable environmental impacts; it is similar in content to an EIS, but more general in scope. An EA is used to determine the need for an EIS when this need is not initially clear. It cannot and should not substitute for an EIS. Although an EA should usually be less detailed than an EIS, it should identify both the significant issues that should be discussed in an EIS, if one is needed, and those which are not significant.

E.2.a.(3) Negative Determination or Declaration (ND): An ND is a brief document stating the reasons for concluding that a proposed action would not cause significant environmental impact. Announcement of its availability and requests for comments on it must be published in the Federal Register. When the new CEQ regulations become effective, NDs will be called Findings of No Significant Impact (FONSIs).

E.2.a.(4) Environmental Impact Statement (EIS): This is a detailed analysis of the environmental effects of a proposed action. It includes descriptions of the environment(s) to be affected, the range of reasonable alternatives for achieving the objectives of the proposed action, the environmental impacts of the proposed action and its alternatives, and responsible public and governmental views of the

action. Generally, a Draft EIS (DEIS) is made available for review and comment by DOE, the public, and other agencies before a Final EIS (FEIS) is published. The exception is Legislative EISs (LEISs), which are to be sent directly to Congress without public or other agency review. Revisions to the FEIS can be made in the form of supplements whenever changes in the proposed action warrant them.

E.2.b. Federal Register Notices: These are announcements in the Federal Register of agency documentation activities. They are designed to encourage public participation in document preparation and review.

E.2.b.(1) Notice of Intent (NOI): This document announces the intent of the agency to prepare an EIS. It briefly indicates the scope of the proposed action, the issues involved, and the alternatives available. It also solicits suggestions from the public for issues to be included in the preparation of the EIS.

E.2.b.(2) Notice of Availability (NOA): This announcement informs the public that an EIS or ND is available for review and comment. Like the NOI, publication of the NOA encourages public participation in the documentation process and helps create a wider review audience for the environmental document.

E.2.b.(3) Notice of Public Meeting (NOPM): This announcement informs the public of both the availability of an EIS and the determination that a public meeting will be held. It identifies the subject matter of the meeting, its location and date, and procedures for reading or acquiring the EIS.

E.2.c. NEPA Regulations and Guidance Used by DOE: These documents establish the requirements and procedures for environmental documentation. To date, only two guidance documents have been issued by DOE, and neither includes comprehensive instructions or guidance for NEPA compliance activities. In the absence of complete instructions, DOE staff have used the guidance and regulations of DOE's predecessor agencies, principally ERDA and FEA. The NEPA guidance and regulations of these two agencies, in addition to those issued by DOE, are discussed below.

E.2.c.(1) ERDA Regulations and Guidance: 10 CFR 711, "Guidelines for Environmental Review," constitutes ERDA's regulations for implementing NEPA. These regulations contain instructions for determining the need for EAs and EISs, determining the scope and content of EISs, encouraging public participation in document planning and review, and preparing and reviewing documents.

ERDA Manual Chapter 0512, "NEPA Implementation," contains an abbreviated list of roles and responsibilities for ERDA units regarding NEPA. It was designed to implement the procedures described in 10 CFR 711 by specifying the duties of program and field offices, and the Assistant Administrator for Environment and Safety.

E.2.c.(2) FEA Regulations: 10 CFR 208, "Compliance with the National Environmental Policy Act," contains FEA's most important NEPA implementation instructions. Published as regulations, they treat procedures for preparing, distributing, and reviewing NEPA documents. Like ERDA's regulations, the FEA regulations are brief and offer only some mechanisms for meeting environmental compliance documentation requirements.

E.2.c.(3) DOE Orders and Guidance: DOE Order 5440.1, "Implementation of the National Environmental Policy Act," was issued in August, 1978. Like ERDA's Manual Chapter 0512, it lists the responsibilities of several key DOE officers and organizations regarding NEPA document preparation and review. One of its most noteworthy contributions toward fulfilling documentation requirements is its outline of the EIS Implementation Plan, a major tool for document planning.

DOE has also issued an updated version of ERDA's "NEPA Implementation Guide." The draft "DOE NEPA Implementation Guide," like its predecessor, is a loose-leaf document developed for optional use by DOE staff. It explains the use of CEQ's 1973 NEPA Guidelines, DOE Order 5440.1, and the earliest versions of DOE's draft NEPA regulations, 10 CFR 1021. The DOE Implementation Guide summarizes those procedures and mechanisms described in DOE orders, executive orders relating to NEPA, and CEQ's guidelines. As such, it provides the same information as these documents, although in a consolidated and more useful form.

10 CFR 1021 has never been promulgated, but it has been significantly revised in response to the CEQ regulations on NEPA issued November 29, 1978. Because it has not been completed and published, DOE program offices have not implemented its provisions to any significant degree. For this reason, it is not considered an existing mechanism for satisfying environmental requirements.

E.2.d. EIS Implementation Plans: DOE Order 5440.1 requires preparation of an EIS Implementation Plan outlining the manner in which an EIS will be produced. This plan is to include:

- The amount of professional work involved and the disciplines required

- Identification of all in-house staff, other agencies' staff, and contractors required
 - scope of work for each
 - identification of project managers
 - identification of primary contacts within DOE and other organizations
- EIS outline
- EIS preparation schedule
- Any publication requirements

The concept of an Implementation Plan appeared earlier in ERDA's NEPA regulations, 10 CFR 711, and ERDA Manual Chapter 0512 as an EIS Preparation Plan. The Preparation Plan calls for a more developed description of the action, the issues, and the alternatives than does the EIS Implementation Plan. It also addresses the subject of personnel requirements and schedules.

E.2.e. Environmental Reports (ERs): This document is prepared by an applicant to the Department; it provides environmental information about a proposed undertaking. Both the draft 1021 regulations and CEQ's NEPA regulations permit DOE to require applicants to submit this type of information, so long as DOE verifies its accuracy and comprehensiveness. A number of program offices in DOE have already used ERs without published DOE guidance.

Since the purpose of an ER is to supply DOE with additional information about a proposed action, its submission aids DOE in several ways. It reduces DOE's workload in data collection and provides the Department with more specific information on which to base a determination of need for environmental compliance documentation. An ER can also be used as an information source for preparation of an EA or EIS. It covers the same types of information required in EAs and EISs.

E.2.f. Use of Contractors to Prepare NEPA Documents: Contractor preparation of NEPA documents is common practice at DOE. However, program offices are fully responsible for the scientific and editorial acceptability of environmental documents prepared for them. Many program offices largely or exclusively use the National Laboratories for this purpose because they are established centers of expertise and perform DOE work on an ongoing basis independent of standard procurement channels.

E.2.g. Document Review and Concurrence: Knowledgeable document review and concurrence certifies that the document has been correctly prepared and ensures sufficient data analysis. It is essential for reducing unnecessary delays later in the documentation process.

Document review begins with a program office evaluation of the document's acceptability. If the program office approves, the document is sent to the NEPA Affairs Division (NAD) of the Office of Environmental Compliance and Overview in EV. If it is not approved, it is returned to the authors for revision. Upon receipt, NAD distributes the document to other offices within DOE for review and coordinates any necessary revision. After completion of its own review and/or revision, NAD recommends concurrence or non-concurrence to the ASEV. Following consultation with the Office of General Counsel, the ASEV makes the final determination on the need for revision. After ASEV concurrence on adequacy, the document is published and distributed for public comment.

E.3. Unsatisfied Environmental Documentation Needs and Potentially Responsive Approaches

Section E.1, above, identifies the environmental documentation requirements imposed by NEPA on the Department of Energy's full range of activities. Section E.2. surveys those existing mechanisms currently being used by DOE and EV to satisfy these requirements.* This section discusses the balance of unsatisfied needs and requirements for NEPA documentation compliance by examining four basic areas in which additional EV effort would return significant, system-wide benefits. In each area, specific suggestions are made for responsive approaches and mechanisms.

E.3.a. Remedying the Uneven Level of Compliance in NEPA Documentation: The problems associated with an uneven level of compliance, and mechanisms for alleviating these problems, are discussed in detail in Section D.3.d. of this chapter as concerns of the environmental planning part of the NEPA Management System. In summary, DOE's current level of response to mandatory documentation requirements ranges from non-compliance to over-compliance. Non-compliance is defined as failure to prepare a document of any kind when some type is required. Partial and over-compliance refer to the preparation of the wrong kind of document. The basic causes for such errors include inadequate guidance, resistance by some program offices, and a general lack of environmental awareness in DOE.

Several mechanisms are required to correct these problems. First, some uniform procedure is required to make determinations about the need for environmental documentation. Dalton•Dalton•Newport has developed the Initial Criteria of Environmental Effects and an approach to categorizing agency actions which can be used to determine whether an action requires an EA, an EIS, or no documentation at all. Section D.3.d. also introduces the concept of the Preliminary Environmental Checklist (PEC) to provide a simple, first-level review of agency actions that may or may not require an EA or EIS.

Second, a mechanism is required to ascertain the correct type of document needed. The concept of tiering helps to determine document type--policy, program, or project--once the determination of need for a document has been made. For

*It should be noted that provisions of the CEQ regulations on NEPA designed to respond to some of these needs are not discussed as existing mechanisms because these regulations will not go into effect until July 30, 1979.

a more detailed discussion of the concept of tiering, see Section D.3.d. of this chapter.

E.3.b. Improvement in Document Quality: A second general category of unsatisfied documentation requirements relates to difficulties with document quality. Environmental documents are often substantively inadequate and/or poorly written. For example, EAs or EISs have often failed to address the full range of alternatives for an action. Similarly, the identification and/or analysis of impacts has frequently been incomplete, with mitigation and monitoring measures remaining conspicuously absent from many DOE environmental documents. In addition, the quality of information supplied by applicants through ERs can be uncertain and uneven. All of these are obstacles to the production of high-quality documents. As a consequence, the value of these documents, even in a receptive decision-making process, is compromised.

Many factors contribute to these difficulties. One relates to the capabilities of document authors. Another is poor document planning. A third is a lack of guidance and training in some aspects of the documentation process, as well as deficiencies or inconsistencies in existing guidance on other aspects, primarily because a comprehensive, current set of DOE NEPA guidance documents does not now exist. In addition, a lack of technical assistance has caused problems with document quality. EV has on occasion neglected to respond to requests for assistance, while some program offices have consistently failed to make such requests. Mechanisms for alleviating these problems are discussed below.

E.3.b.(1) Combining the EIS Scoping Process with EIS Implementation Plans (EIS/IPs): The EIS scoping process is required by CEQ's NEPA regulations. The Environmental Impact Statement Implementation Plan is an existing mechanism partially responsive to this requirement. Combining the two can help fulfill the documentation requirements of NEPA. As proposed, the EIS scoping process will result in an EIS Implementation Plan.

The program office should hold a scoping meeting at the earliest feasible time with NAD, other concerned DOE offices, and any other federal agencies which will be involved in preparing the EIS. The purpose of the scoping meeting will be to develop an EIS/IP containing:

- A description of the action, the alternatives to it, and significant issues involved;
- Identification of insignificant issues (including a statement about why they are not significant)

and those significant issues which have been (or will be) adequately covered in related EISS;

- Identification of any other related EISS or EAs;
- An integrated schedule for both the development of the proposed action and the EIS preparation and review;
- Identification of any other environmental review and consultation requirements mandated by NEPA-related laws;
- Determination of preparation requirements and responsibilities, such as lead agency, project manager, interdisciplinary needs, required level of effort, contractor assistance, cooperating agencies, and other assisting agencies, organizations, individuals, and DOE offices (and their roles);
- Determination of potential conflicts of interest of preparers; and
- Detailed identification of public participation opportunities.

Input from other federal agencies and the public obtained through publication of a Notice of Intent will be used to refine the draft EIS/IP and to resolve any questions on the roles of various in-house participants.

The completed EIS/IP will be submitted to the Director of NAD for approval. Thus, the EIS/IP serves as a kind of contract which documents the mutual understanding between EV and the program office about what is required to produce an acceptable EIS. If this document planning work is properly done, there should seldom be any unanticipated problems which would require EV to reject an EIS. It is also important that this "contract" be modifiable whenever significant new issues are identified. Both EV and the program office would be responsible for initiating renegotiation of the EIS/IP as soon as possible in such instances.

Combining the EIS/IP with CEQ's scoping process affords DOE an excellent opportunity to substantially improve its fulfillment of the document planning requirement. In turn, this planning should facilitate efficient preparation of many of the other documents required.

E.3.b.(2) Preparation of Environmental Assessment Implementation Plans (EA/IPs): The preparation of a simple EA/IP is advisable for basically the same reasons which support

the development of an EIS/IP. It focuses both the substantive and logistical aspects of preparing an EA and provides all participants with a common understanding of the requirements for that particular document. Further, the idea of "a plan to implement the EIS or EA requirement" is endorsed in the Under Secretary's draft memo "Procedures for Environmental Review" (undated, but approximately mid-January, 1979).

In contrast to the EIS/IP, an EA/IP:

- is developed solely in-house; there is no requirement to involve other agencies or the public.
- requires a scope of work sufficient to establish whether there would be significant environmental impacts, without requiring exhaustive analysis.

E.3.b.(3) Increased Use of Applicant-supplied Data and Independent Verification: The draft DOE regulations on NEPA, 10 CFR 1021, and the CEQ regulations (Section 1506.5a) permit DOE to require environmental information from applicants for use in reviewing an action or preparing an EIS. CEQ requires that the agency independently evaluate the data (Section 1506.5a) and stipulates that the applicant cannot actually write the EIS. To date, applicant information has been presented in Environmental Reports (ERs). Section 1506.5b of the CEQ regulations now also permits applicants to prepare EAs.

It seems highly appropriate for DOE to require that applicants for permits, certificates, licenses, financial assistance, non-competitive contract awards, exemptions, etc., submit an EA with their application when the proposed activity falls in a non-exempt category of action and seems likely to produce environmental impacts. This would shift part of the burden of preliminary NEPA compliance work to the applicant and permit DOE to process more applications within its funding constraints. The EA would be used to determine whether an EIS is needed (and to aid in its preparation, if required) before DOE approves or disapproves the application. There would be no need to require an ER since the EA fulfills its function.

In the case of competitive proposals, it seems unreasonable for DOE to require the applicant to go to the expense of preparing an EA. Further, no single applicant is in a position to define all the alternatives available to DOE since they are defined by the array of technically acceptable proposals received (plus the no-action alternative, of course). It does seem desirable to require project- and/or site-specific environmental data, in the form of an ER

submitted with the proposal, from applicants for competitive awards. DOE could then develop an EA or EIS from these data, using the proposals to define the alternatives. In this way, the environmentally preferable alternative(s) could be identified and the award could be made with consideration of environmental factors at the cost of only minimal delay in the procurement process.

To implement the above concept, two conditions are necessary. First, there must be a mechanism within the procurement process for requiring and evaluating the Environmental Report. This is discussed in Section F.1.a.(1) of this chapter. Second, there must be substantive guidance as to the nature and format of the environmental data required.

10 CFR 1021 states that applicants who must prepare ERs should be guided by the content requirements for EAs or EISs specified in that document. An ER should include a description of the proposed action, its natural resource and manpower requirements, anticipated effluents and associated pollution control or other mitigation measures, and baseline data on the environment at the proposed site. However, the level of detail required should be guided by the type of NEPA document anticipated, i.e., is the ER definitely to be the basis for an EIS, or only an EA or PER. Different types of ERs may be appropriate for different DOE programs. In any event, the nature and format of the data would have to be precisely stipulated in order to facilitate its subsequent use by DOE. Such detailed stipulation is provided by the Nuclear Regulatory Commission for ERs from applicants for construction permits.

CEQ requires that an agency evaluate applicant-submitted data, but provides no guidance on the form or content of the evaluation. One possibility is to have the program office or its NEPA support contractor prepare an Independent Verification Report (IVR) to validate applicant-prepared ERs and EAs. As conceived, these reports should be very brief and considerably less costly than preparation of the ERs and EAs by DOE.

Preparation of an IVR would involve:

- Determination of whether the ER or EA accurately and adequately describes the proposed action, potentially impacted environments, the impacts, and all needed mitigation and monitoring activities;
- Determination of which of the impacts are significant;
- Evaluation of the appropriateness of the analytical methods and professional staff used to prepare the ER or EA;
- Determination of whether the proposed action would violate any laws or standards; and

- Specification of deficiencies in the ER and EA and requirements for an acceptable revision.

ERs and EAs should not generally be deficient if the applicant follows DOE guidance; uses competent environmental personnel to prepare the document; and, when permissible, confers with the program office and NAD prior to developing his approach. In competitive procurement situations, DOE personnel may not be permitted to advise the applicant on preparation of his ER, except through written guidance available to all bidders.

If DOE uses a contractor to prepare the IVR, it should select one who is certified as competent and has no conflict of interest. The CEQ regulations require that agencies using contractors to prepare EISS obtain a statement from them disavowing any interest in the outcome of the project (Section 1506.5c). This requirement should apply to the IVR contractor as well and a similar statement should be obtained before the contractor is selected.

In addition to helping alleviate the problems associated with document quality, applicant-supplied data and its independent evaluation can increase the degree to which other NEPA documentation requirements are met. For example, these mechanisms assist in the overall collection of environmental data necessary for the analysis of alternatives. Properly used, they can also help reduce DOE's document preparation responsibilities.

E.3.b.(4) Ready Access to NEPA Support Contractors:
Another way to improve document quality is to allocate sufficient personnel for the preparation and/or evaluation of environmental documents. Given DOE's limited staff resources, one responsive mechanism could be ready access to NEPA support contractors. Such conflict-free contractors could be hired on a task-order basis to prepare EAs and EISS and/or to evaluate applicant-supplied documents. Advance hiring of a support contractor for these functions should eliminate procurement delays. DOE program offices frequently use the National Laboratories as support contractors for document preparation and review, although it is alleged that the laboratories sometimes have a conflict of interest in the actions they appraise.

E.3.b.(5) Use of Skilled Writers: Section 1502.8 of the CEQ regulations requires agencies to employ skillful writers and to produce EISS written in understandable language. If necessary, agencies should also hire editors. The use of competent writers and editors should reduce the number of poorly written documents, the need for editorial review of documents by EV and other DOE offices, and consequent delay. Employing good writers and editors is a

relatively simple mechanism for fulfilling DOE's NEPA document preparation requirements.

E.3.b.(6) Development of Mitigation and Monitoring Plans (MMPs): Many DOE actions generate impacts which require specific activities to mitigate potentially adverse environmental effects. Typically, EISs are reviewed and approved without clear specification of required mitigation and monitoring measures and their costs. It is hardly surprising, therefore, that mitigation and monitoring performance are seldom assured once the EIS has been finally approved. This constitutes a clear violation of NEPA and, probably, a number of related environmental laws. Therefore, the proposed NMS places heavy emphasis on mitigation and monitoring through: 1) the development of a relatively detailed plan (the MMP) prior to EIS approval and 2) ongoing overview by EV to assure that it is implemented (see Section F.3.b. of this chapter).

The MMP should not only describe mitigation and monitoring activities, it should also show how monitoring data will be used to correct or minimize unexpected adverse effects. That is, it should indicate who will review the data, how often, and accepted procedures for bringing any problems to the attention of the appropriate official(s). The MMP should contain more detailed information than would be appropriate for the EIS and should be summarized and referenced in the FEIS.

Typically, the MMP would be prepared concurrently with the FEIS once a preferred alternative has been identified by the program office. In many cases, detailed design work for the proposed action would follow the EIS; therefore, further specification of the MMP should also follow the EIS. Nonetheless, it is crucial that the MMP be available to the decision maker when the go/no-go decision is made for the proposed action. Further, the MMP should provide a level of detail sufficient to make the scope of the agency's mitigation and monitoring commitment clear to both the decision maker and other reviewers. Such commitments would then be factored into budget requests and further action planning. In any case, CEQ requires a summary of the agency's plans for mitigation and monitoring to be included in the Record of Decision (Section 1505.2).

Monitoring must begin prior to any other overt action in order to establish baseline conditions. Mitigation generally commences with construction, not with operations. Construction and operations contractors should understand that funding must be conditioned upon adherence to the agency's mitigation and monitoring plans (CEQ regulations, Section 1505.3).

The chief advantage of the MMP is its usefulness in identifying detailed mitigation and monitoring needs and estimating their cost. This program office function is a prime requirement of the documentation part of the NMS.

E.3.b.(7) Improved Guidance and Training: One of the main causes of poor document quality and related delays in review has been a lack of certain types of guidance and deficient or inconsistent guidance. Therefore, EV should consider a major effort to produce effective guidance for the preparation of environmental documents.

Some approaches to improved guidance have already been developed. The Initial Criteria of Environmental Effects and categorization of actions discussed in Section D.3.d.(1) of this chapter are examples. However, guidance on other aspects of documentation and on the process as a whole is needed, including:

- Comprehensive guidance outlining the NEPA documentation system in general;
- Detailed guidance for program offices and specific programs on environmental analysis, preparation and review procedures, and acceptable analytical techniques;
- Guidance on specific topics such as DOE's responsibilities as a joint or cooperating agency, the tiering of documents, conducting effective public hearings, and NEPA-related environmental laws and requirements;
- Training courses on DOE's NEPA Management System for all field and headquarters offices; and
- Workshops with program offices to provide a forum for genuine two-way communication about problems with the NEPA process and possible solutions.

It is important for EV to submit new environmental guidance and regulations to the field offices and headquarters offices simultaneously. This kind of direct communication, along with personal interaction such as training courses and workshops, could improve EV's visibility and, in turn, its effectiveness.

The availability and use of consistent and comprehensive guidance should greatly increase the quality of DOE's environmental documents. Benefits will also accrue throughout the documentation process in terms of better document planning, more comprehensive data collection, improved data analyses, and more expeditious document preparation and review.

E.3.c. Improvement of the Document Review Process: The third category of environmental documentation problems involves document review. A number of difficulties have been noted in this area. Among them is the matter of prolonged review. In a few extreme cases, EV and other headquarters offices have taken as long as a year to review environmental documents. Such long turnaround times, which are costly both in terms of program delay and EV credibility, are unnecessary if both the project office and EV perform well.

A related problem has been inadequate review both in terms of superficiality and, in some cases, a total lack of evaluation. Occasionally, no headquarters office has reviewed an EIS section prepared by a DOE field office for another federal agency as part of an inter-agency EIS effort. Program offices have failed to adequately examine environmental documents prepared for them by contractors, but have nevertheless issued them for intra-DOE review. In many cases, reviews by EV and other DOE offices have emphasized editorial concerns at the expense of substantive issues.

Interviews at field offices and with Regional Representatives (RRs) have also revealed a number of other difficulties, most of them the result of failures in communication or a lack of recognition of the potential roles of field office personnel and RRs in satisfying NEPA documentation requirements. For example, field offices have occasionally received only verbal comments on their EISs without any written substantiation, and program offices frequently fail to allow field offices sufficient review time because they need to make up the time lost in the document preparation. In addition, DOE's Regional Representative Offices, which are responsible for DOE's liaison with other governments and the public in the federal regions, are not consistently included in the review loop. Staff in the regional offices are familiar with the states potentially affected by an action and could provide valuable and constructive criticism of documents. Finally, headquarters has sent very few EISs prepared by other agencies to DOE's field offices for review, even when the actions discussed in the EISs affected the areas served by those offices.

Another difficulty involves conflicts of interest in the review process. Sometimes preparers of documents also review them. This has occurred with DOE contractor-operated National Laboratories. In another type of potential conflict of interest, DOE Order 5440.1 gives NAD the responsibility for preparing policy and legislative EAs and EISs when these types of proposals affect more than one DOE office. As the penultimate level of intra-DOE document review, NAD has a clear conflict of interest in reviewing its own documents. To date, no such instance of conflict has arisen.

Review of documents often has low priority outside NAD. This can be caused by a lack of appreciation for, and feedback to, professionals who invest their time in serious evaluations of documents for which they have no line responsibility. Without some indication that their effort is of value, reviewers soon lose their motivation. This is a serious problem since broad review is important to the production of a genuinely interdisciplinary document in which the range of DOE's environmental concerns are adequately analyzed. More generally, review is also essential to the incorporation of information and opinions needed by the decision maker to make informed determinations.

All too often, it appears that the quality of a NEPA document has been irrelevant. EISS simply have not been used in making decisions. Decisions to proceed with an action do occur in advance of document preparation, with the expectation that the EIS, EA, etc., will provide justification.

Unresolved problems accumulated during the document planning and preparation stages tend to manifest themselves during the review process. Compounded by review process difficulties internal to EV, they rapidly develop into crises which reduce staff productivity and disrupt routine operations. The root causes for these "show-stoppers" include poorly prepared documents, serious understaffing in NAD and other key DOE offices, ineffective document tracking, no advance planning to meet review requirements (including the specific staff to be involved), and the absence of solid guidance to reviewers on issues of concern. All of these difficulties and their associated causes conspire to produce less than useful environmental information for decision making. Mechanisms and procedures suggested for remedying these problems are discussed below.

E.3.c.(1) Production of Better Draft Documents: It is difficult, and sometimes impossible, to review a poorly written document for substantive content. In such cases, the initial review has to be primarily or exclusively editorial. The first step in assuring a meaningful and rapid document review, therefore, is for the program office to assume full responsibility for quality text and the mechanics of presentation. Failure to discharge this responsibility would result in EV's summarily returning the draft document to its author office.

E.3.c.(2) Document Review Planning: In-house review of environmental documents should be planned in coordination with the preparation of an Implementation Plan. The results of this planning should be included in an Environmental Review Plan (ERP) and annexed to the EA or EIS Implementation Plan.

As envisioned, the ERP would be prepared by NAD. Naturally, the program office would be given the opportunity to review and comment on it as it is being developed. The ERP should contain:

- Identification of the NAD Review Manager and all DOE and contractor staff to be involved in the review,
- Some indication that all designated reviewers have agreed to perform this responsibility,
- Assurances that all reviewers have no conflict of interest and no vested interest in the outcome of the proposed action,
- A reasonable review schedule linked to milestones for both the EIS and the action, and
- A list of any others who will be asked to review the document.

The ERP and the EA/IP or EIS/IP would be approved by the Director of NAD at the same time.

E.3.c.(3) Better Definition of NAD/EV Roles and Procedures for Document Review: CEQ's NEPA regulations require agencies to examine their own EISs and those of other agencies which fall within their area of jurisdiction, expertise, or authority (Section 1503.2). The best review role of EV offices other than NAD in this regard is not yet certain. One approach to interdisciplinary review is to draw on a number of offices in EV and DOE for staff with relevant expertise or technical training. For reasons outlined earlier, this approach is problematical; many offices throughout DOE, including other offices in EV, are reluctant to invest significant effort in NEPA reviews. Another approach assumes that the only way to assure thorough, rapid, and consistent review is for NAD to staff for all the needed expertise. NAD, however, is generally short of personnel and can cover only a limited range of expertise.

A specific mechanism for dealing with these matters cannot be proposed at this time. However, a general reassessment of responsibilities for review within EV is urgently needed. Also, to better allocate staff resources, EV should push for clarification of its responsibilities regarding review of its own documents and those of other agencies.

E.3.c.(4) Guidance to In-house Reviewers: Specific guidance on document review should be added to the list provided in the section on document quality. In accordance with Section 1503 of the CEQ NEPA regulations, such guidance

should emphasize the need for substantive review, the nature of constructive criticism, and general agency-wide procedures for transmitting comments to NAD. Such guidance should be provided by NAD.

NAD should also supplement the above general guidance with specific instructions for the review of a particular EIS, focusing the reviewers' attention on the issues thought to be most significant or whose significance is likely to be controversial.

E.3.c.(5) Instructions to Document Revisers: Whenever EV determines that a NEPA document requires revision, NAD should supply the program office with specific written instructions for improvement. These instructions should include identification of any unanswered questions which require further research. In many cases, it may be necessary to characterize what constitutes a responsive answer.

E.3.c.(6) Feedback to Reviewers: Copies of the written revision instructions issued to the program offices should be provided to reviewers. New or revised sections responsive to their comments should be highlighted. Reviewers should also receive copies of final EISs. (Although there is no legal requirement to incorporate and respond to comments on EAs, it is prudent to do so if the proposed action is determined to be non-significant and no EIS is prepared.) Such feedback mechanisms would emphasize the importance of reviews and provide evidence that the effort involved was of value. Feedback should encourage wider and more serious participation in the review process.

E.3.c.(7) Document Tracking: DOE needs a system to track the progress of environmental documents. Such a system could help ensure the orderly functioning of the documentation process by objectively identifying the points at which obstacles occur. While this capability would be helpful during document preparation, it seems essential during review of both DOE and other agencies' documents.

A computerized tracking system for NAD called IMPACT is currently under development. It has been designed to trace the history of EAs, EISs, and any correspondence relating to them. This system should indicate those milestones a document has or has not met and identify the response (or lack of it) to requests concerning the document. By comparing a document's actual progress to the schedule in the Implementation Plan, this tracking system could alert NAD to any difficulties early so they can be resolved without unnecessary delay. Further, IMPACT outputs should be invaluable in responding efficiently to questions from the public about the status of documents.

To function adequately, such a system requires the following types of support:

- Sufficient monies and personnel to implement and operate the system
- A directive indicating that use of the system is mandatory for all parts of DOE
- Guidance on how to enter or update information on the system
- A top-down commitment in EV to take full advantage of the system.

TRAKS is the machine system now used by the ASEV and the DASEV to monitor those EV action assignments they consider most important. Office directors within EV may also enter items on TRAKS.

As in the case of the DOE-wide ACTS system, this EV system has been used to trace the progress of certain environmental documents. Indeed, EV may find it advantageous to enter all DOE EISS on TRAKS for a number of reasons:

- To keep the ASEV, DASEV, and others, including the Director of the Office of Environmental Compliance and Overview, routinely informed of important EISS in which they may be eventually involved;
- To serve as an accountability mechanism to supplement IMPACT; or
- To serve as an accountability mechanism instead of IMPACT.

In any case, DOE's NMS requires some system to track the status and location of environmental documents and to ensure accountability for timely progress.

E.3.c.(8) Protection of the Integrity of EV's Review Role: Currently, EV is responsible for the preparation of environmental documents under two circumstances: 1) whenever proposals for policy and legislative initiatives involve two or more DOE offices, and 2) whenever other EV offices with program responsibilities propose actions subject to NEPA review and documentation.

These preparation responsibilities pose a potential conflict with NAD's and EV's review responsibility. The problem of EV's preparing and reviewing policy and legislative EISS could be solved by transferring the preparation responsibility to the Office of Policy and Evaluation (PE). As an

office directly concerned with policy formulation, PE could legitimately assume this particular preparation function, leaving the integrity of EV's review role intact.

For EAs and EISs on EV programs and projects, the conflict resides at the ASEV level. Effectively, the same individual has responsibility for determination of document need, document preparation, and document review and approval. Therefore, one approach would be to submit decisions on document preparation and, ultimately, the documents themselves for review and concurrence to another knowledgeable Secretarial Office which may be affected. In the case of non-concurrence by these offices, EV should submit the issue to the Under Secretary for resolution.

E.3.c.(9) Preparation of Record of Decision (ROD):

Section 1505.2 of the CEQ regulations on NEPA requires the decision maker to prepare a ROD for actions requiring an EIS at the time of decision or, if appropriate, at the time of a recommendation to Congress. In all cases, this must be done after preparation and review of the final EIS or legislative EIS, as appropriate.

A ROD will help fulfill a number of requirements. First, it will focus attention on the mitigation and monitoring plan. A ROD must identify both the environmentally preferable alternative and the alternative chosen. This CEQ requirement makes the ROD not only a mechanism for documenting the decision on the desired alternative, but also a vehicle for explicitly explaining the reasons for not selecting the environmentally preferable option, if that was the case. However, the ROD's most important function is to ensure that the decision maker will consider the EIS and document how it was used in making the decision. Section 1506.1 of the CEQ regulations specifies that no activity which may have a significant impact on the environment may occur until the ROD is published.

The regulations also state that the ROD is to be a public document, but they do not prescribe a method for making it available to the public. The NMS Conceptual Framework envisions that the ROD will be attached to, and circulated with, the FEIS during its 30-day comment period. This will allow reviewers to comment not only on the technical adequacy of the EIS, but also on the weight that DOE gave to environmental considerations in its decision and on the adequacy of the mitigation and monitoring activities to which the agency is committed.

E.3.d. Clarification of NEPA Document-Related Roles and Responsibilities: Many of the problems associated with uneven levels of compliance, document quality, and document

review stem from confusion about which DOE units are responsible for particular document-related NEPA activities. Errors of omission and commission which frustrate the smooth operation of the documentation process would occur far less often if EV were to publish clarifying NEPA guidance. Therefore, in addition to the types of guidance suggested in Sections 3.b. and c. above, there is an agency-wide need for information specifying the distribution of NEPA roles. Suggestions on the nature of such guidance follow.

The NMS identifies four basic types of responsibility that a DOE unit may have in the development of NEPA documents:

- Planning review
- NEPA compliance document preparation
- NEPA document review
- Decision document preparation

A given office may have more than one of these responsibilities, but it is most unlikely that one office would have all four.

Similarly, in terms of a proposed action which may require NEPA documentation, a DOE unit may have one or more of the following generic roles:

- Initiating Unit - originates the proposed action
- Informal Review Unit - reviews and comments on a possible action prior to its being formally proposed
- Formal Review Unit - reviews, comments on, and/or makes recommendations on a proposed action and/or all reasonable alternatives. This can include concurrence responsibility.
- Decision-Making Unit - makes the go/no-go decision on the proposed action. Such a unit generally has the authority to designate the NEPA responsibilities of other organizational units which may be involved as initiating or review units.
- Implementing Unit - has the direct responsibility to carry out the proposed action, if it is approved.

Table IV-2 presents a matrix which juxtaposes these action-related roles against each type of NEPA documentation

FOOTNOTES

1. Unit: An organizational unit may be any office, division, or branch within DOE, or an individual, task force, or formally recognized working group or committee. Any unit may take one or more of the generic roles, in sequence or concurrently.
2. Determination of the need for NEPA documentation is subject to the concurrence of the Assistant Secretary for Environment (ASEV)
3. Decision makers are defined for the purpose of this study according to their legal definition as Presidential appointees. In DOE, decisions as made by Assistant Secretaries or higher authorities, or by their formally designated representatives.
4. Go/no-go decisions are those which show an essentially final commitment by an agency to implement or not implement a proposed action.

responsibility. Entries in the cells specify the duties incumbent on each type of DOE unit. EV's elaboration and refinement of this kind of tool, perhaps by program type, would provide clearer guidance to DOE units which do not now understand their NEPA document obligations.

E.4. Summary of Mechanisms for Meeting Environmental Compliance Documentation Requirements

E.4.a. Summary of NEPA Compliance Documents: To fulfill its goals, the NMS includes a number of NEPA compliance documents, one or more of which may be appropriate at one or another of the three DOE activity levels (policy, program, project). The general characteristics of each type of NEPA document are summarized in Table IV-3.

Of the documents summarized in the table, the following are explicitly or implicitly required by the CEQ regulations on NEPA and/or by DOE rules:

- Environmental Reports (ERs)
- Environmental Assessments (EAs)*
- Findings of No Significant Impact (FONSIs)*
- Environmental Impact Statements (EISs)*
- EIS Implementation Plans (EIS/IPs)
- Records of Decision (RODs)
- Notices of Intent (NOIs)*
- Notices of Availability (NOAs)
- Notices of Public Meeting (NOPMs)

Only the four types of documents denoted by asterisks are formally designated as environmental documents in the CEQ regulations.

In addition to the above, the NMS suggests the following documents:

- Preliminary Environmental Checklists (PECs)
- EA Implementation Plans (EA/IPs)
- EIS Review Plans (ERPs)
- Mitigation and Monitoring Plans (MMPs)
- Independent Verification Reports (IVRs)

At first glance, recommending five kinds of environmental compliance documents not already explicitly required may seem inconsistent with the goal of reducing NEPA-related

Table IV-3 Summary of Principal Environmental Compliance Documents for the DOE NEPA Management System

Type of Document	Purpose	Content	Prepared By	Reviewed By	Concurrence or Approval By
Preliminary Environmental Checklist (PEC)	To determine whether the proposed action meets one or more Initial Criteria and has the potential to cause significant environmental impact.	Series of questions, appropriate to the nature of the program, to be answered yes or no. Some quantitative data may be required.	The initiating office		
Environmental Report (ER)	To provide data to be used by DOE in preparation of an EA or EIS relating to competitive proposals.	Environmental data as stipulated by DOE for the program.	The contract proposer (or his contractor), grant applicant, etc.	Program office	Program office
Environmental Assessment (EA)	To determine whether the proposed action will have significant environmental impact and facilitate the preparation of an EIS when needed.	Brief discussion of need for the proposed action, of alternatives, of environmental impacts of the proposed action and alternatives and a list of agencies and persons consulted.	The program office (or its contractor) or, in certain cases, by an applicant (or his contractor)	Program office, EV (NAD) and OGC.	ASEV
Independent Verification Report (IVR)	To validate the accuracy of environmental information (ERs or EAs) prepared and submitted by applicants.	Certification of adequacy of specific items in ERs or EAs and specific identification of inadequacies, if any.	The program office or its contractor	Program office and NAD	
Finding of No Significant Impact (FONSI)	To document the reasons for DOE's conclusion that the proposed action would not cause significant environmental impact and that an EIS should not be prepared.	The EA or a summary of the EA and a statement of the reasons for the finding.	The program office	EV (NAD)	ASEV

Type of Document	Purpose	Content	Prepared By	Reviewed By	Concurrence or Approval By
EA Implementation Plan. (EA/IP)	To provide a guide for the preparation of a specific EA.	Definition of the proposed action and the range of alternatives, identification of the major impacts to be evaluated, specification of other environmental review requirements, logistics for document preparation, and the timetable for preparation and review.	The program office or, in certain cases, by the program office in cooperation with the applicant	Program office, EV (NAD) and OGC	EV (NAD)
Environmental Impact Statement (EIS)	To provide other governmental agencies and the public with an opportunity to comment on proposed actions which would have a significant impact on the quality of the human environment.	Purpose and need for the proposed action, description of the alternatives including the proposed action, the affected environmental consequences, a list of preparers, and any appropriate appendices.	The program office (or its contractor)	Program office, EV (NAD), OGC, and designated reviewers in-house, and externally by other governmental agencies and the public.	ASEV
EIS Implementation Plan (EIS/IP)	To provide a guide for the preparation of a specific EIS and be a "contract" between the program office and NAD for that EIS.	In addition to all items required for an EA/IP, an identification of insignificant issues and a statement explaining their lack of importance, plans for public participation in the EIS process, and (as an appendix) an EIS Review Plan (see below).	The program office, with NAD advice	Program office, EV (NAD) and OGC	Director, NAD

<u>Type of Document</u>	<u>Purpose</u>	<u>Content</u>	<u>Prepared By</u>	<u>Reviewed By</u>	<u>Concurrence or Approval By</u>
EIS Review Plan (ERP)	To stipulate the participants and timing of the in-house review for a specific EIS.	Identification of the types of disciplines that should be involved in interdisciplinary review, names and organizational affiliations of the individuals in DOE who will provide such review (to provide prior notification and prevent individuals or organizations involved in preparation from also being involved in review), and a schedule for review and concurrence activities.	NAD	NAD and the program office	Director, NAD
Record of Decision (ROD)	To assure that decisions are made in accordance with the policies and purposes of NEPA to the extent these policies and purposes are not in fundamental and unavoidable conflict with DOE's other statutory responsibilities.	Identification of the alternative(s) considered, and specification of the alternative(s) considered environmentally preferable. Identification and discussion of all relevant factors balanced by DOE in reaching its decision, including any essential considerations of national policy, and how these considerations entered into DOE's decision.	The decision maker (i.e., a Secretarial Officer or his designee)	EV (NAD)	ASEV

<u>Type of Document</u>	<u>Purpose</u>	<u>Content</u>	<u>Prepared By</u>	<u>Reviewed By</u>	<u>Concurrence or Approval By</u>
		dress of the DOE Statement that all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and, if not, why. Summary of the monitoring and enforcement program adopted, where applicable, for any mitigation.			
Mitigation and Monitoring Plan (MMP)	To describe in detail the program of mitigation and monitoring of potential adverse effects of the preferred alternative should it be implemented.	Detailed specification of the mitigation measures to avoid or minimize adverse environmental effects and the methods adopted for effluent monitoring, source-oriented ambient monitoring, and/or regional ambient monitoring of physical, chemical, biological and/or socioeconomic impacts as appropriate.	The program office, with advice of DOE and NAD)	EV (NAD and DOE)	ASEV
Notice of Intent (NOI)	To announce in the Federal Register and other appropriate media that DOE plans to prepare and use in its decision making an EIS on a specific proposed action.	Brief description of the proposed action and possible alternatives; description of DOE's scoping process leading to the final EIS/IP and whether, where and when a public scoping meeting will be held; and the name and address of the DOE	The program office	EV (NAD)	EV (NAD), AD

<u>Type of Document</u>	<u>Purpose</u>	<u>Content</u>	<u>Prepared By</u>	<u>Reviewed By</u>	<u>Concurrence or Approval By</u>
Notice of Intent (Cont'd)		contact person for the proposed action and EIS.			
Notice of Availability (NOA)	To announce in the Federal Register and other appropriate media the availability for public and agency review of a draft or final EIS or a FONSI.	Brief description of the proposed action and the alternatives considered, an indication of the probable preferred alternative and whether DOE plans to hold any public hearings with respect to the proposed action, and the name and address of the DOE contact person for the proposed action and EIS. In the case of a FONSI, the NOA also summarizes DOE's reasons for concluding that the proposed action does not require the preparation of an EIS.	The program office	EV (NAD)	EV (NAD), AD
Notice of Public Meeting (NOPM)	To announce in the Federal Register and other appropriate media one or more public meetings to explain the proposed action and the EIS to the public and to obtain public comment on both.	Same as for the NOA except that the time and place of all public meetings is specified and the name, address and telephone number of the appropriate DOE contact person is given.	The program office in coordination with IR and EV (NAD and OPC).	EV (NAD and OPC) and IR	ASEV, IR

paperwork. In a systems context, however, this apparent contradiction is resolved. The use of Preliminary Environmental Checklists, for example, should substantially reduce the number of unwarranted EAs produced by DOE, while still assuring more comprehensive, early NEPA review of agency actions. The EA Implementation Plans and EIS Review Plans are intended to better focus the processes of preparing EAs and reviewing EISs, respectively. In both cases, better focus should reduce overall paperwork and generally increase the efficiency of the NEPA documentation process.

In addition, the Mitigation and Monitoring Plans respond to NEPA and related environmental laws requiring mitigation and monitoring. Because both these activities can be expensive, the agency cannot responsibly engage in them without careful planning, including documentation. Further, Section 1505 of the CEQ regulations on NEPA requires disclosure of the commitment the agency is making to mitigation and monitoring at or before the final decision about whether to implement the proposed action. Independent Verification Reports provide a means for EV to evaluate applicant-prepared ERs and EAs, thereby fulfilling another CEQ NEPA requirement.

E.4.b. Compliance Document Sequencing: The NMS distinguishes four categories of proposed DOE actions: 1) those that are categorically excluded (or NEPA-exempt) and which require no environmental review; 2) those that normally require the preparation of an EA; 3) those that normally require an EIS; and 4) those remaining actions which require a Preliminary Environmental Review (PER) to decide what, if any, document is required. Correctly determining which of the above categories is appropriate for each action is crucial since the category defines the starting point in the documentation process. In turn, the starting point determines the time and work requirements that should be considered in the planning and scheduling of an action.

As an example, Figure IV-16 summarizes the general sequence of documentation for administrative actions and integrates the categorization of actions with this process. It does not attempt to describe review and concurrence procedures or other aspects of the documentation process.

E.4.c. Variation in Compliance Documentation as a Function of Action Type: Figure IV-17 diagrams the general documentation process for policy, program, and various types of project-level actions. Categorization of an action is the point of entry into the documentation process.

The diagram indicates the use and sequence of six environmental documents: Preliminary Environmental Checklists, Environmental Reports, Environmental Assessments, Findings

TYPE OF ACTION

POLICY

e.g., Legislative Proposals
National Energy Plan

PROGRAM

e.g., Program Plans
Initial ESAPPs
Regulations Development

PROJECT

DOE-Originated

In-house Activities
e.g., Rate-setting for Doe
Products and Services

Non-Competitive Proposals

e.g., Sole-Source Contracts
Formula Grants

Competitive Proposals

e.g., Solicited Contracts,
Cooperative Agreements

Applicant-Originated

e.g., Loan Guarantees, Grants,
Rate-setting for Regulated
Industries, Permits, Licenses, etc.

Figure IV-17 Principal Variations in the NEPA Compliance Documentation Process As a Function of Action Type

Figure IV-16 Sequence of NEPA Compliance Documents for Administrative Actions

KEY:

- ◊ - Would There be Significant Environmental Impact?
- PER - Preliminary Environmental Review
- PEC - Preliminary Environmental Checklist
- ER - Environmental Report
- IVR - Independent Verification Report
- EA/IP - EA Implementation Plan
- EA - Environmental Assessment

- FONSI - Finding of No Significant Impact
- NOA - Notice of Availability
- NOI - Notice of Intent
- NOPM - Notice of Public Meeting
- NOF - Notice of Filing

- EIS/IP - EIS Implementation Plan
- EIS - Environmental Impact Statement
- DEIS - Draft EIS
- FEIS - Final EIS
- MMP - Mitigation and Monitoring Plan
- ROD - Record of Decision

Time periods indicated are the minimum required by NEPA or its regulations.
* For some types of actions, a minimum 30-day comment period is required by the CEQ regulations.

of No Significant Impact, Environmental Impact Statements, and Records of Decision. To simplify the presentation, a number of other environmental documents have been excluded from this chart: EA and EIS Implementation Plans and Notices of Intent, of Availability, and of Public Meeting. While important, these have been eliminated to focus attention on the linkages between the documents which deal directly with environmental impacts. The diagram is also intended to provide a comparative view of the documentation streams associated with the tiering concept.

Policy-related NEPA documents cover such actions as legislative proposals and the biennial National Energy Plan. The importance of policy EAs and EISS lies in their ability to identify the range of impacts associated with policy choices. While at this level these impacts are necessarily general, environmental documents can highlight both the further narrowing of alternatives and the need for further environmental research. Legislative EISS must be completed and submitted to Congress within 30 days of submitting the initiative and, in any case, before Congressional hearings on the proposal begin.

Program actions follow a similar documentation process with one exception: the lack of a legislative/administrative split in the review process after preparation of a DEIS. All program EISS enter a public review and comment period and undergo revision into an FEIS prior to the issuance of a Record of Decision. The narrowing of alternatives in program EISS and EAs is much more pronounced than at the policy level.

Project EAs and EISS discuss specific alternatives in site and/or design for DOE actions. The most profound variations in documentation occur at the project level because there are so many options for procuring RD&D or other services or facilities, providing financial assistance, and processing regulatory actions. Still other permutations of procedure are attributed to the direct involvement of contractors, applicants, etc., at the project-level.

Non-competitive proposals and applicant-originated proposals (e.g., loan guarantee or certain grant proposals, permit applications, etc.) follow the pattern for project-level actions shown in the table by submitting environmental information in the form of an EA to DOE. Competitive proposals that have the potential to produce significant environmental impacts follow a different process in that applicants may have to prepare ERs. In either case, DOE must independently verify this applicant-supplied information.

E.4.d. Guidance: The discussions of various aspects of compliance documentation in this chapter all stress the need for new or improved mechanisms to meet environmental requirements. Guidance is highlighted throughout because it can address both the unsatisfied needs identified in this report and enhance the use of existing mechanisms. While a considerable body of DOE NEPA guidance is available now, much of it has proven to be inadequate in practice. Further, the CEQ regulations impose new obligations for which guidance must be developed. These factors, together with the findings on NEPA system operation presented in this report, argue strongly for new or improved guidance in the following areas:

- Preparation of Environmental Reports and/or Environmental Assessments by applicants.
- Conduct of Preliminary Environmental Reviews, including the development and use of Preliminary Environmental Checklists.
- Validation of applicant-prepared Environmental Reports and/or Assessments.
- Definition and management of the EA/EIS review process through the development of EA and EIS Review Plans.
- Scoping for EAs and EISs, particularly with regard to the range of reasonable alternatives and the review and consultation requirements set out in NEPA-related statutes, executive orders, and regulations.
- Preparation of Mitigation and Monitoring Plans.
- Preparation of Records of Decision.

In devising a strategy for developing these types of guidance, the diverse needs of various DOE users should be an important consideration. Materials tailored to the characteristics of major program types (e.g., technology-oriented, regulatory, etc.) can significantly improve the accuracy and efficiency of the documentation process. Table IV-2 in Section E.3.d. of this chapter provides a preliminary framework for targeting guidance on NEPA planning and documentation responsibilities.

Most, if not all, of the needed documentation guidance is inextricably intertwined with that needed for related environmental planning and implementation/evaluation activities. Therefore, further discussion of guidance needs is deferred to Chapter V, "Logistical Considerations for Implementation of the NEPA Management System."

**F. Program/Project Environmental
Implementation and Evaluation Part
of the NEPA Management System**

	<u>Page No.</u>
F. PROGRAM/PROJECT ENVIRONMENTAL IMPLEMENTATION AND EVALUATION PART OF THE NEPA MANAGEMENT SYSTEM	IV-110
1. Requirements of the Program/Project Environmental Implementation and Evaluation Part	IV-110
a. Program Office Functions	IV-110
(1) Consideration of Environmental Factors in the Procurement Process	
(2) Consideration of Environmental Factors in Site Selection and Development	
(3) Safety Analyses for Design, Construction, and Operation	
(4) Occupational Health and Safety During Design, Construction, and Operation	
(5) Environmental Impact Mitigation and Monitoring During Construction and Operation	
(6) Environmental Control Technology RD&D	
(7) Program/Project Environmental Evaluation	
b. Office of Environment Functions	IV-114
(1) Environmental Guidance to the Procurement Process	
(2) Site Selection, Acquisition, and Development	
(3) Guidance, Training, and Independent Oversight for Program Office Environment, Safety, and Health Protection Activities	
(4) Environmental, Health, and Safety Research	
(5) Decontamination and Decommissioning	
(6) Traffic Control of Non-Defense Nuclear Materials	
(7) Evaluation of Environmental Components in DOE Activities	
c. Functions of Other Offices	IV-116
(1) Directorate of Procurement and Contracts Management	
(2) Directorate of Administration	
(3) Office of Policy and Evaluation	
d. Functional Summary	IV-118
2. Existing Mechanisms for Meeting Environmental Requirements	IV-120
a. Site Evaluation Reports	IV-120
b. Unified and Independent Safety Review System	IV-120
c. Environment, Safety, and Health Protection Programs	IV-121
d. Reviews of Environment, Safety, and Health Protection Programs in DOE Facilities	IV-121
e. Independent Oversight of Environmental Control Technology RD&D	IV-122
f. Environment, Safety, and Health Research Programs	IV-123
g. Decontamination and Decommissioning	IV-123
3. Unsatisfied Environmental Implementation and Evaluation Requirements and Potentially Responsive Approaches	IV-124
a. Management Plan for Integrating Environment, Safety, and Health into Procurement and Contract Activities	IV-124
b. Guidance for Mitigation and Monitoring	IV-127
c. Decontamination and Decommissioning	IV-127
4. Summary of Mechanisms for Meeting Program/Project Environmental Implementation and Evaluation Requirements	IV-128

F. PROGRAM/PROJECT ENVIRONMENTAL IMPLEMENTATION AND EVALUATION PART OF THE NEPA MANAGEMENT SYSTEM

F.1. Requirements of the Program/Project Environmental Implementation and Evaluation Part

NEPA requires a federal agency to do much more than prepare environmental documents. Fundamentally, it requires agencies to carry out their programs in an environmentally acceptable manner; NEPA document preparation, in the final analysis, is merely a mechanism for achieving this goal. This section of the report describes the functions of the program/project environmental implementation and evaluation part of the NMS and DOE's current system for assuring that its programs and projects are implemented in accordance with the findings of the relevant NEPA documents and any other germane environmental requirements. In addition, some new approaches are discussed to further promote DOE's compliance with NEPA.

To respond effectively to the wide range of environmental requirements involved in program/project implementation and evaluation, a number of offices must be involved. The section below briefly describes the functions of the program office, EV, and certain other DOE offices in this area.

F.1.a. Program Office Functions: Program offices play a major role in meeting the environmental implementation and evaluation requirements of the programs and projects they develop. These requirements are associated with every major stage in the life history of an action. The presentation below treats key requirements along the continuum from procurement to project/program evaluation.

F.1.a.(1) Consideration of Environmental Factors in the Procurement Process: Because procurements may result in actions which have the potential to generate environmental impacts, program and project implementation planning must provide for consideration of the environment in procurement activity.* While procurement administration lies beyond the scope of program office functions, early attention to NEPA documentation needs for activities funded through procurements can avoid downstream program/project interruptions and delays. Some specific office responsibilities can be identified.

*See Section C.3.b.(2) of this chapter and Appendix B for a discussion of the procurement process.

Before submitting its procurement request, the program office should consider what NEPA documentation and other environmental requirements are associated with the procurement. For example, the program office should specify that environmental requirements and guidance for the preparation of any needed NEPA compliance documents be included in solicitations and in other communications to potential proposers. For sensitive activities, contractors should be required to include a description of their approaches to environmental compliance and mitigation measures in their proposals. Further, costs incurred by the contractor in meeting environmental requirements should be considered in proposal evaluations and contract awards.

In the case of procurements under \$5 million, where contractor responses are usually evaluated only by the program office, that office should be responsible for assuring that the potential contractor has submitted any required NEPA documents, i.e., a Preliminary Environmental Checklist (PEC), Environmental Report (ER), or Environmental Assessment (EA). Further, in developing the evaluation criteria for proposals involving potentially impactful actions, program offices should make certain that environmental factors complement technical merit and cost. In some cases, the CEQ regulations (Section 1506.1) require the preparation of EAs or FEISs prior to the award decision (see Appendix B). This section of the CEQ regulations "does not preclude development by applicants of plans or designs or performance of other work necessary to support an application for Federal, State or local permits or assistance."

The program office should have the same responsibilities for procurements over \$5 million, which go through a formal source evaluation process. In these cases, however, program office involvement may be less direct, and coordination with other bodies, e.g., Business Strategy Groups, Source Evaluation Boards, and Solicitation Review Panels, will be required.

Finally, the program office, in conjunction with the Directorate of Procurement and Contracts Management (PR) and EV's Operational and Environmental Safety Division (OESD), should be responsible for assuring that appropriate stipulations protecting the environment, safety and health during funded activities are included in procurement instruments. For example, a Mitigation and Monitoring Plan prepared in conjunction with an EIS might be annexed to a contract as part of the Scope of Work.

F.1.a.(2) Consideration of Environmental Factors in Site Selection and Development: The draft DOE Orders "Site Selection" and "Site Development and Facility

Utilization Planning" assign environmental responsibilities to the program office regarding the selection, acquisition, and development of new or existing sites for DOE activities. (See Section C.3.b.(3) of this chapter for information on site-related departmental procedures.) Under some circumstances, site evaluation can be conducted as part of the procurement process; potential contractors propose sites and site evaluation is a principal selection factor. However, site selection can occur outside the procurement process. The discussion which follows applies only to this latter mode of site evaluation.

In many instances the manager of an outlay program serves as the site selection official. As such, he is responsible for appointing or approving the Site Evaluation Committee, which develops site evaluation criteria, investigates and evaluates certain sites, develops findings, and makes recommendations to him. According to the draft DOE Order on site selection, the program office must assure that the Site Evaluation Committee and the site selection official consider environmental, health, and safety factors in the evaluation of prospective sites.

Program offices also play an important role in planning both the development of sites and the future use of existing facilities, if any, on those sites. They must make certain that future plans for these facilities and for site development comply with the environmental, safety, and health requirements of DOE and any other cognizant federal, state, and local agencies, in accordance with the draft DOE Order, "Site Development and Facility Utilization Planning." Plans for future development are construed to include nuclear material safeguards and decontamination and decommissioning, as well as other factors.

F.1.a.(3) Safety Analyses for Design, Construction, and Operation: Operations for which DOE assumes a health, safety, or environmental responsibility should include an analysis of the potential hazards and impacts as early as possible in the life cycle of the project, according to DOE Order 5481.1, "Safety Analysis and Review." Such an analysis permits early identification of potential health, safety, or environmental problems involved in the design, construction, or operation of a facility. Early identification facilitates elimination or mitigation of these problems in the most cost-effective manner.

The program office with the first-level operating responsibility for each facility must assure that these safety analyses are prepared prior to the initiation of operations. The office must also review each safety analysis and, based

on an assessment of its adequacy, authorize construction, operation, and subsequent modifications of the facility.

F.1.a.(4) Occupational Health and Safety During Design, Construction, and Operation: ERDA Manual Appendix 6301, "Facilities General Design Criteria," requires that occupational health and safety matters be addressed throughout the construction and operation of DOE projects. For example, facilities should be designed to protect against fire, explosion, toxic chemicals, radiation, and other hazards to ensure the safety and health of employees and the protection of property. Each field office is responsible for implementing DOE design, construction, and operations procedures for the facilities within its jurisdiction to assure compliance with required codes, standards, and guides.

F.1.a.(5) Environmental Impact Mitigation and Monitoring During Construction and Operation: The program office is responsible for planning mitigation and monitoring in conjunction with development of the EIS. Such planning should be further detailed during project design and implemented during construction and operation. This area of NEPA responsibility is particularly significant to program management because monitoring should begin at least two years before construction in order to establish a baseline. Monitoring should continue during construction and operation, and the data should be used to modify the project or mitigation activities, as appropriate. The program office should send monitoring reports to EV for review.

In general, field organization managers and directors should assure that DOE sites under their purview maintain an environmental monitoring and reporting program that accurately describes and documents the impact of DOE operations on the local environment. These data can be invaluable in preparing new NEPA documentation for similar facilities.

F.1.a.(6) Environmental Control Technology RD&D: DOE program offices have principal responsibility for conducting RD&D on environmental control technologies necessary to make energy technologies operate economically within environmental standards. The program offices are responsible for assuring that an appropriate control technology will be available by the time a given energy technology is ready to enter the commercialization phase. This implies that control technologies should be proven no later than completion of the technology demonstration phase.

F.1.a.(7) Program/Project Environmental Evaluation: Managers of programs and projects for technology RD&D and energy-related products and services are responsible for evaluating their progress in terms of environmental, technical, and economic objectives. Therefore, program/project

evaluation plans should include criteria for measuring success in meeting environmental control technology RD&D and related environment, health, and safety research milestones. These plans should give particular emphasis to progress in solving any environmental problems which could significantly delay completion of the project or program.

From an environmental point of view, evaluation of regulatory programs is as important as evaluation of technology RD&D programs. Indeed, some regulatory programs have the potential for causing more profound and widespread environmental impacts than many technology RD&D programs. The evaluation of regulatory program environmental impacts cannot be effectively performed by simply relying on the public comment process; there must be some prior evaluation planning and data gathering and analysis. Similarly, a periodic evaluation of programs which provide financial assistance to other than technology RD&D, e.g., loan guarantees, is needed.

F.1.b. Office of Environment Functions: The Office of Environment has an oversight and guidance role in program/project environmental implementation and evaluation. It must assure that any applicable environmental, safety, and health requirements are met at the appropriate stage in the life of the program or project and provide assistance to program offices, which have primary responsibility for compliance. In addition, EV has important responsibilities related to its own programs. EV's role in major program/project activities is discussed below.

F.1.b.(1) Environmental Guidance to the Procurement Process: The Office of Environment is ultimately responsible for assuring environmental compliance in the procurement process. DOE Order 5440.1, "Implementation of the National Environmental Policy Act," requires EV to "develop procedures for determining which DOE procurements have potential environmental significance, and review all DOE procurement solicitations and resulting contracts determined to have potential environmental significance."

EV can provide guidance to the procurement process in several ways: it can advise; it can provide information, guidelines, and criteria to boards and program offices; and it can review and/or concur in procurement decisions.

EV should identify the environmental, safety, and health requirements and any needed mitigation measures to be included in solicitations. EV should also help evaluate environmental information or reports submitted with proposals.

F.1.b.(2) Site Selection, Acquisition, and Development:
The Office of Environment has a well-defined support and review role in the site selection process. Its function is to assure that environmental, health, and safety concerns are considered in the selection of a site and that the primary and secondary environmental impacts of the facility and program activities on the site are considered in planning for its development and the use of its facilities. EV reviews, appraises, and evaluates all environmental, safety, and health activities related to site development and facility utilization planning.

The ASEV is also responsible for certain actions concerning the use of DOE's real property holdings. The ASEV reviews requests from field offices for permission to decontaminate radioactive sites and determines the necessity for EISs and EAs on actions relating to real estate management.

F.1.b.(3) Guidance, Training, and Independent Oversight for Program Office Environment, Safety, and Health Protection Activities: The ASEV has ultimate authority and responsibility within the Department for establishing environment, health, and safety standards and requirements and for approving exceptions to them. EV is also responsible for inspecting DOE facilities to assure that they are operating in conformance with laws, regulations, and policies concerned with environmental, safety, and health matters.

As the responsible line officer, the Director of the Operational and Environmental Safety Division (OESD) in EV provides technical advice and assistance concerning the above requirements. The Director of OESD is also responsible for developing policies, procedures, and guidelines for investigating and reporting contamination, accidents, or unacceptable environmental impacts.

OESD conducts appraisals of the safety, health, and environmental procedures of DOE facilities and brings any condition or operations not in compliance with the program to the attention of the ASEV. OESD also serves as a central point for collecting and evaluating monitoring information.

F.1.b.(4) Environmental, Health, and Safety Research:
The Office of Health and Environmental Research (OHER) in EV is responsible for planning, managing, and assessing research programs directed at elucidating the health and environmental effects of energy-related pollutants. Health effects research includes chemical characterization of effluents; determination of their toxicity, mutagenicity, and carcinogenicity; and related epidemiological analyses. Environmental effects research includes characterization of pollutants, their dispersion and translocation in the environment, and their impacts on biota, climate, and the overall ecosystem.

OHHER is also responsible for research on the prevention or mitigation of energy-related health and environmental impacts and on the restoration or reclamation of damaged environments.

F.1.b.(5) Decontamination and Decommissioning: EV's Environmental Control Technology Division (ECTD) is responsible for decontaminating and decommissioning surplus DOE facilities and sites which are radioactively contaminated. It is also responsible for cleaning up other contaminated sites such as old uranium mill tailing dumps and nuclear test sites under DOE's control.

F.1.b.(6) Traffic Control of Non-Defense Nuclear Materials: ECTD is also responsible for managing the transportation of DOE's non-defense nuclear materials. This includes the safe shipment of nuclear fuel material used in energy production and the shipment of nuclear wastes for reprocessing, storage, and disposal. The transfer of nuclear weapons and classified or strategic nuclear materials is the responsibility of the Office of Defense Programs.

F.1.b.(7) Evaluation of Environmental Components in DOE Activities: Program and project evaluations are often meaningless exercises unless their results are fed back into policy and program planning. Therefore, since many energy technologies are in the developmental stage, and since the site for each new project provides a different set of environmental and technological concerns, a strong EV evaluation program is critically important. EV is responsible for evaluating the empirical data associated with the environmental components of programs and projects, including the effectiveness of the environmental control technologies tested, unexpected problems with adverse environmental impacts and any innovative solutions that successfully mitigated them, and the projects' forecasted environmental acceptability compared with that actually achieved.

EV should make certain that the results of these evaluations are shared with the appropriate program offices and other DOE units which participate in establishing policy or program priorities. Specifically, post-audit environmental evaluations should go to the Office of Policy and Evaluation for inclusion in its comprehensive project assessments. Moreover, evaluation results should also inform planning for EV's own programmatic activities with respect to research and field operations.

F.1.c. Functions of Other Offices:

F.1.c.(1) Directorate of Procurement and Contracts Management (PR): PR provides procedures and staff support

for procurements throughout DOE. Insofar as environment is a part of the procurement process, PR can make sure that the proper interface, coordination, and scheduling with EV occurs in the development of solicitations and contracts, and in procurement guidance documents, handbooks, and policy. It can facilitate the NEPA process by modifying its procedures to bring them into line with NEPA requirements.*

Further, PR can ensure that proposals involving actions with the potential for significant environmental impacts are evaluated on the basis of environmental information as well as technical merit and cost. Toward that end, EAs and FEISs, when required, must be prepared prior to, and used in, decisions on contract awards. Thus, PR can serve as an administrative checkpoint to ensure that program office requirements submitted to it consider the environment and that NEPA documents are submitted at the appropriate time in the procurement process.

F.l.c.(2) Directorate of Administration (AD): AD is DOE's designated office for dealing with the Department of Labor on matters of federal employee safety and health. In this role, AD develops the policies, procedures, and requirements for federal employee occupational health and safety programs, which are based on the health and safety standards and requirements developed by EV. AD conducts appraisals of federal employee occupational health and safety programs and provides direction for safety and health training for DOE officials.

AD also has environment-related responsibilities in site selection and development. First, AD is responsible for maintaining lists of criteria and guidance (including those for environmental considerations) for site selection. Second, AD reviews Site Evaluation Reports before they are submitted to the site selection official. Finally, AD has a large coordination role in site planning. It is responsible for establishing policy for site development, criteria for

*It should be noted that the CEQ regulations on NEPA (Section 1500.6) require federal agencies to review their policies, procedures, and regulations and revise them as needed to comply fully with the requirements of NEPA to the extent not expressly prohibited or made impossible by other statutes. According to Section 102(1) of NEPA, "The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act"

site development plans, and procedures for the coordination of these plans among the appropriate headquarters offices. To the extent that environmental concerns are represented in policy and plans for site acquisition and development, AD also has environmental functions in the implementation of DOE projects.

F.1.c.(3) Office of Policy and Evaluation (PE): PE is responsible for the overall evaluation of DOE policies, programs, and projects. More specifically, the Environmental Planning and Evaluation Division is responsible for evaluating the program/project implementation and evaluation aspects of other offices' environmental and occupational safety and health programs. Through this division, PE should incorporate the findings of EV's evaluations on environmental control technologies and monitoring into its own assessments. In this way, the evaluation of environmental factors would become an integral part of total project evaluations. Achieving such an integration would be significant, since PE's analyses play a major role in the development of future DOE policy.

F.1.d. Functional Summary: Figure IV-18 summarizes the functions of the program/project environmental implementation and evaluation part of the NMS. This figure is an elaboration of Box (6) of Figure IV-1. The functions fall into a number of broad categories: procurements; safety analyses; environment, safety, and health protection; environmental RD&D; and evaluation of programs and projects in terms of their success in meeting environmental objectives and requirements. To clarify roles and responsibilities, functions have been distributed among program offices, EV, and various staff offices.

Figure IV-18

Program/Project Environmental Implementation and Evaluation Part of the NMS Conceptual Framework

F.2. Existing Mechanisms for Meeting Environmental Requirements

Several mechanisms useful in satisfying the environmental requirements of program/project implementation and evaluation are already available to DOE. Some are well-developed, while others require modification to make them effective in a NEPA system.

F.2.a. Site Evaluation Reports: The Site Evaluation Report (SER), as defined in the draft DOE Order, "Site Selection," is prepared by the Site Evaluation Committee upon completion of the Site Evaluation Survey to document the rationale for its recommendation. Prior to its submission to the site selection official, this report should be reviewed by the ASEV and the Director of Administration and concurred in by the manager of the major outlay program when the Secretary serves as the site selection official.

Although Site Evaluation Reports vary in scope and content, several principal items are supposed to be covered. These include a discussion of site location, population density, local socioeconomic characteristics, health and safety hazards, anticipated environmental and socioeconomic impacts, environmental control requirements (federal, state, and local), a waste disposal analysis, and other relevant information. The SER is, in most respects, similar to an EA and could serve as the basis for NEPA documentation.

F.2.b. Unified and Independent Safety Review System: The Unified and Independent Safety Review System (UISRS) establishes uniform requirements for the preparation and review of Safety Analysis Reports on DOE projects. Such analyses identify hazards, assess risks and means for their elimination or control, and document the authorizations for various stages of facility design, construction, and operation. UISRS applies to all DOE projects except nuclear safety of weapons designs, construction-related work activities, and DOE operations having only hazards of a type and magnitude routinely encountered and/or accepted by the public. The system requires analysis of DOE operations as early as possible in the life cycle of the operation in order to facilitate early identification of hazards and their control and elimination. For complex or expensive operations, the UISRS recommends that a Preliminary Safety Analysis Report (PSAR) be prepared during the design phase and be reviewed and approved before commencing fabrication and/or construction and that a Final Safety Analysis Report (FSAR) be prepared and approved before facility start-up. The program office is responsible for preparing these reports; EV provides independent oversight.

ASEV reviews Safety Analyses for all major system acquisitions prior to construction, projects which have an exceptionally high risk potential, and any projects which warrant reviews in addition to those of the program office. Through the preparation and review of Safety Analyses, the environmental requirement that this type of analysis be performed and coordinated with environmental documents can be satisfied.

The Safety Analysis is a natural follow-on to the environmental assessments or impact statements prepared in advance of facility design work. It permits an evaluation of whether the design will meet performance assumptions made in the EIS, thereby providing the first level of assurance that environmental performance will be as intended. Whenever unanticipated problems are encountered through the safety analysis process, it may be necessary to consider publishing a supplement to the existing NEPA documentation.

F.2.c. Environment, Safety, and Health Protection Programs: DOE's Environment, Safety, and Health (ES&H) Program assures protection of the environment, the safety and health of the public and employees, and government property through compliance with applicable statutory requirements affecting federal facilities and operations. The DOE ES&H Program described in draft DOE Order 5400, "The Department of Energy Environment, Safety, and Health Program," is aimed at compliance with federal requirements imposed by statutes such as NEPA, the Endangered Species Act, the Toxic Substances Control Act, and the Energy Supply and Environmental Control Act.

The ES&H Program establishes requirements for the monitoring, evaluation, and reporting of on-site discharges, including liquid and airborne effluents. It focuses on environmental conditions in the vicinity of DOE sites in order to assess levels of radioactivity and of nonradioactive pollutants and their impact on the public and the environment.

The Director of the Operational and Environmental Safety Division (OESD) has responsibility for collection, collation, and evaluation of ES&H monitoring data. The Director of OESD also coordinates headquarters review and the compilation of plans for environmental pollution abatement. The ES&H Program is an established mechanism capable of meeting the need for environmental monitoring and mitigation.

F.2.d. Reviews of Environment, Safety, and Health (ES&H) Protection Programs in DOE Facilities: To help implement its policy of protecting the environment, people, and property during the operation of its facilities, DOE has developed a system of inspections or appraisals. This three-level system is designed to assess the effectiveness of ES&H

protection programs in each of DOE's facilities. DOE Order 5482, "Environment, Safety, and Health Appraisal Program," describes this appraisal system.

The first level of appraisal is conducted by the program office or its operating contractor and is termed an internal audit. The audit examines and evaluates the internal ES&H program, program plan implementation procedures, and operations at the contractor level. The second-level review, accomplished by functional and management appraisals, is performed by the program office or its field office, OESD, and by the Director of AD, who conducts only functional appraisals. The appraisals evaluate a facility's compliance with DOE's ES&H requirements and the related requirements of other federal agencies. The third level, conducted by senior officials in OESD and the program office, also consists of functional appraisals and management appraisals. These use information from site visits and first- and second-level appraisals to thoroughly review facility compliance with environmental, safety, and health requirements.

Information obtained from this system of reviews is used to rectify identified problems and to assess the sufficiency of DOE's ES&H program requirements. Appraisals aid in the monitoring function required to implement and evaluate DOE programs and projects.

F.2.e. Independent Oversight of Environmental Control Technology RD&D: Independent oversight of program office environmental control technology RD&D is one of the principal functions of EV's Environmental Control Technology Division (ECTD). This is accomplished by:

- Maintaining up-to-date information about current applicable federal, state, and local environmental standards and those which may be under development.
- Assisting EV's Office of Program Coordination and the DOE R&D Coordination Council with the annual inventory of environmental control technology RD&D being conducted by DOE program offices and by other federal agencies.
- Tracking state-of-the-art advances in environmental control technology principles and capabilities by non-governmental and foreign entities.
- Disseminating the above types of information to DOE program offices involved in environmental control technology RD&D.

By acting as a clearinghouse for information on environmental control technology RD&D, ECTD helps ensure the use of the latest and best technology by program shops.

F.2.f. Environment, Safety, and Health (ES&H) Research Programs: Most of DOE's ES&H research is planned, managed, and evaluated by EV's Office of Health and Environmental Research (OHER). The actual research, although funded by OHER, is performed by contractors, grantees, and certain units within the program offices. Most of this research focuses on the environmental, safety, and health aspects of nuclear technology development and commercialization. However, some effort is devoted to other technologies. Research projects are selected from among proposals through a peer review system which involves the use of outside experts as well as DOE staff. Projects are reviewed in-house on an annual basis to determine whether they should receive continued funding. Full peer review occurs in alternate years.

DOE program offices may also fund and manage ES&H research programs, particularly those needed to support RD&D efforts in control technology. Environmental RD&D is coordinated within DOE primarily through the EDPs and PEPs discussed in Section D.2.g. of this chapter. OHER works closely with the program offices and EV's Office of Technology Impacts in developing these documents.

Coordination of DOE ES&H research with that of other federal agencies is done by PE's Environmental Planning and Evaluation Division and by EV's Office of Program Coordination (OPC). OPC maintains the Federal Inventory of Environmental Research, which is intended to facilitate identification of duplicative research and opportunities for cooperative work.

F.2.g. Decontamination and Decommissioning: The Environmental Control Technology Division (ECTD) conducts DOE's program for decontaminating and decommissioning radioactively contaminated surplus facilities and sites in coordination with the nuclear waste management programs of the cognizant program office. In addition to ongoing surveillance and management of such facilities and sites, ECTD develops and refines methods and procedures for decontaminating and decommissioning and plans, manages, and assesses research and development for long-term advanced nuclear waste management concepts.

F.3. Unsatisfied Environmental Implementation and Evaluation Requirements and Potentially Responsive Approaches

Year One efforts in the program/project environmental implementation and evaluation part have not been as comprehensive as those in the planning and documentation parts. Consequently, while there may be unfulfilled environmental requirements in many elements, only three have been developed sufficiently to warrant suggesting remedies:

- The integration of environment, safety, and health activities into procurement and contract activities;
- Environmental impact mitigation and monitoring; and
- Decontamination and decommissioning of non-nuclear facilities.

F.3.a. Management Plan for Integrating Environment, Safety, and Health (ES&H) into Procurement and Contract Activities:

DOE is currently developing a Management Plan to integrate the NEPA-related requirements of the Operational and Environmental Safety Division (OESD) with the procedures of the Directorate of Procurement and Contracts Management (PR). The Plan's purpose is to identify mechanisms for eliminating the following deficiencies in EV/PR interactions:

- Lack of coordination. Multiple contact points result in redundant communications and unnecessary paperwork.
- Ad hoc application of EV inputs and personnel to procurement processes.
- Late entry of many ES&H requirements, which creates project delays.
- Missynchrony in the timing requirements specified by PR and EV orders, which results in process gaps or overlaps.
- Generally ill-defined interfaces between EV and PR regarding procurement, contract, and NEPA procedures.

Resolution of these problems is complicated by interlocking sets of requirements for environment, safety, and health. Environmental requirements include: 1) determinations of the need for NEPA compliance documentation; 2) document preparation; 3) environmental monitoring before, during, and after project implementation; and 4) corrective action for

excessive or unlawful environmental impacts occurring at a project site. Safety requirements include mechanisms to protect the safety of personnel, property, and the public, and reporting systems, investigations, and corrective action for injuries and loss. Health requirements include programs for protecting the health of personnel and the public from hazardous substances or phenomena and for investigating facilities.

Further complications arise from the diverse sources and forms of ES&H requirements. These requirements are embodied in:

- Federal laws, codes, executive orders, and regulations
- DOE orders and guidance documents
- State ES&H laws and regulations.

ES&H requirements also take several forms. One is documentation such as EAs, EISs, and Safety Analyses (SAs). Other ES&H requirements are standard contract clauses attached to contracts, as appropriate. Still a third form is a contractor-prepared document explaining how the contract clauses will be followed or accomplished. Other forms of ES&H requirements include permits and licenses and ES&H standards for cleanliness, health, and emissions.

To begin the process of integration, OESD, with the assistance of Dalton•Dalton•Newport, developed flow charts to highlight ES&H requirements, procurement processes, EV and PR interfaces, opportunities for EV involvement in procurement processes, and ES&H documentation gaps. These flow charts revealed a number of opportunities for new mechanisms to correct the deficiencies in EV/PR interaction.

One mechanism is a set of two new documents yet to be developed. These documents would integrate the ES&H requirements mentioned above with procurement processes at two levels.

The first document is a General Environmental Requirements Document (GEVR) which will set forth those general ES&H requirements relevant to any DOE action requiring procurement and contracting. As envisioned, a GEVR will include those types of ES&H requirements which should be inserted in Requests for Proposals, Program Opportunity Notices, and subsequent contracts. In this manner, all parties directly concerned with DOE actions would have a general understanding of the procurement procedures and corresponding ES&H requirements which will govern the life of any project.

The second document is a Specific Environmental Requirements Document (SEVR). SEVRs would be designed for the type of contract and technology relevant to a particular project. It would list those ES&H standards, contract clauses, federal laws, DOE orders and guidance, NEPA procedures, and program plans required for a specific contract.

In addition to the GEVR and SEVR, the Management Plan has also identified several new opportunities for EV involvement in procurement activities which would further improve EV/PR coordination:

- Direct participation in the source selection process (see Section C.3.b.(2) of this chapter). EV could serve as an advisor to the Business Strategy Group (BSG) to assist in identifying environmental concerns to be considered in procurement strategies.
- Membership on the Source Evaluation Board (SEB). This crucial role would offer EV the opportunity to identify ES&H requirements and mitigation measures that should be included in solicitations. As an SEB member, EV could also evaluate the environmental information submitted with proposals. This evaluation, in turn, could be useful to the entire board in its assessment of proposals.
- Membership on the Solicitation Review Panel (SRP). Here EV can ensure that solicitations include the appropriate ES&H requirements as well as ES&H criteria by which responses to solicitations will be judged.
- Development of a handbook for use by procurement and program offices, the BSG, the SEB, and the SRP. This handbook would outline the environmental issues to be considered at various points in the source selection process by each group.
- Use of the DOE procurements tracking system. The computerized system known as IPMIS identifies the status of each procurement action entry. IPMIS could be modified to call up those actions which have been determined to have the potential for significant environmental effects. IPMIS could also show whether required environmental compliance documents have been prepared for these actions. Use of IPMIS for these purposes would capture all or a selected portion of procurements under \$5 million. Procurements below this threshold do not go through a formal SEB and, therefore, receive no routine EV review.

F.3.b. Guidance for Mitigation and Monitoring: Uniform guidance for mitigating and monitoring the adverse impacts of facility construction, operation, and decommissioning is absent or inadequate for the non-nuclear technologies. At least two DOE program offices have attempted to develop their own guidelines for environmental monitoring, but their efforts were not coordinated.

EV should work with the relevant program offices to develop detailed guidelines for environmental mitigation and monitoring which can be applied consistently to DOE projects. These guidelines should treat monitoring for such effluent and non-effluent impacts as noise, groundwater, socioeconomic, and other ambient resources. Most importantly, they should focus attention on the objectives of the monitoring program for each project and require specification of how the monitoring data would actually be used to help manage the project.

Such guidelines are needed for the PR/EV Management Plan discussed in the section above and for the Mitigation and Monitoring Plans to be written in conjunction with the preparation of EISs. (See Section E.3.b.(6) of this chapter.) Guidance linking mitigation and monitoring activities to the sensitive issues identified in the EIS would permit validation of EIS predictions and, by extension, advancements in the impact forecasting state-of-the-art.

F.3.c. Decontamination and Decommissioning: There is currently no program of decontamination and decommissioning (D&D) for non-nuclear RD&D facilities comparable to that for nuclear. Many non-nuclear facilities, particularly those involving fossil energy technologies, have the potential for producing highly hazardous and long-lasting wastes which may present public health problems years after decommissioning. Therefore, at least preliminary planning for a D&D program applicable to non-nuclear facilities should be undertaken.

F.4. Summary of Mechanisms for Meeting Program/Project Environmental Implementation and Evaluation Requirements:

Several of the mechanisms designed to meet the program/project environmental implementation and evaluation requirements discussed in this section are depicted in Figures IV-19a-d. They are presented in considerably simplified form as procedural modifications to more basic processes for the implementation and evaluation of programs and projects. Since some of the existing mechanisms discussed in Section F.2. now include no explicit provision for assuring NEPA compliance, not all appear in the figure.

Figure IV-19a Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Project Management System

KEY TO FIGURES IV-19a, 19b, 19c, 19d

- ◆ EA or EIS May be Needed Before Decision
- ▲ Preliminary Environmental Analysis is Needed for Specific Actions Under Consideration
- △ Process Should Include General Environmental Requirements for Future Actions

DALTON • DALTON • NEWPORT
April, 1979

Figure IV-19b Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Procurements > \$5 Million

Figure IV-19c Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Site Selection, Acquisition and Development

Figure IV-19d Overview of Program/Project Environmental Implementation and Evaluation Mechanisms - Design, Construction, Operations

**G. Integration of Parts in the
Conceptual Framework**

	<u>Page No.</u>
G. INTEGRATION OF PARTS IN THE CONCEPTUAL FRAMEWORK	IV-133
1. Basic DOE Functions	IV-133
2. NEPA-related Functions	IV-135
a. Environmental Planning Part	IV-135
b. Environmental Compliance Documentation Part	IV-137
c. Program/Project Environmental Implementation and Evaluation Part	IV-138
3. Conclusion	IV-140

G. INTEGRATION OF PARTS IN THE CONCEPTUAL FRAMEWORK

G.1. Basic DOE Functions

Figure IV-20 graphically portrays the interrelationships of the Department of Energy's basic functions and the NEPA Management System. To keep the figure relatively simple, only major avenues of information flow are shown.

As the arrows connecting the boxes on the left indicate, the relationships among DOE's basic functions are fairly straightforward. Departmental policy for implementing its statutory authorities is transmitted to the DOE planning and managerial staff in the form of policy and fiscal guidance. If the Department needs additional authority to carry out its policies, the Secretary directs the appropriate Secretarial Officers to prepare needed legislative proposals to advance to Congress. Subsequently, DOE's program and project planning activities, which are based on Departmental policy and statutory authorities, establish the directions and approaches to be taken by the programs and projects. Execution of these plans and evaluation of their results follow in turn.

Of course, considerable planning and management also take place during implementation. Programs and projects are subject to continual evaluation and mid-course adjustment to better achieve their objectives. At least as important from a systems perspective, however, is the formal program/project evaluation that occurs, or is supposed to occur, as major program and project phases are completed. If feedback mechanisms are working properly, the products of such evaluations provide some input to further policy development and much of the information needed for new iterations of program/project planning.

These fundamental linkages are easily understood. Relationships among basic DOE functions and the components of the NEPA Management System are far more complex, however, because the progression of activities is not linear.

Figure IV-20 NEPA Management System Conceptual Framework

Basic DOE Functions

DOE NEPA-Related Functions

G.2. NEPA-related Functions

G.2.a. Environmental Planning Part: The Environmental Planning Part of the NMS should strongly influence both DOE Policy Development and Program/Project Planning. The Environmental Planning Part involves two major types of activity: evaluation of the alternatives available to the decision maker in terms of their general environmental implications and the scheduling of NEPA compliance documentation. Currently, this is done systematically and comprehensively only for major technology RD&D programs/projects through the DOE environmental planning system, made up of Environmental Readiness Documents (ERDs), Environmental Development Plans (EDPs), and Project Environmental Plans (PEPs). Environmental planning for other types of programs is less well developed and, in some cases, practically nonexistent. At the policy development level, the lack of systematic consideration of environmental consequences in the evaluation of alternatives is even more pronounced. It is not surprising, therefore, that DOE has frequently had problems with scheduling NEPA documents for policy decisions. Policy-level EISs have tended to be post-facto justifications of decisions made far in advance of the issuance of the document rather than tools used in making the decision. In short, the integration of environmental planning with DOE's basic policy-making and program/project planning functions has been inadequate except in the technology RD&D area, where encouraging progress is being made. Many of DOE's other problems with NEPA compliance are attributable to this lack of integration.

In the area where such integration is strongest, technology RD&D, a number of initial inadequacies are gradually being worked out as a function of experience. EDPs were criticized for not being effective in identifying and prioritizing environmental RD&D needs and for failing to specify the type and timing of NEPA documentation needed at given points in the technology RD&D process.

While some further improvements can be expected in the ERD/EDP/PEP system, the inherent limitations of this type of planning must be recognized. RD&D planning is usually difficult because the discovery of new knowledge is unpredictable. This is particularly true at the "basic," as opposed to the "applied," end of the RD&D spectrum. In addition, because such work often depends on the seasonal rhythms of nature, it cannot be accelerated to gain synchrony with an arbitrary technology development schedule. Identifying the real environmental problems associated with a given technology presents still other complications. Sometimes a significant environmental problem is not revealed until relatively late in technology development. Although

corresponding environmental research may be inaugurated without undue delay, the results are unlikely to be available when they are needed. Therefore, even with the most energetic effort at the EDP level of environmental planning, the fine structure of NEPA compliance activities may be beyond reach.

On the other hand, many significant environmental problems are foreseeable at an early stage of development. Several of the more intractable issues now inhibiting DOE's programs were identified many years ago, but DOE's predecessor agencies chose not to invest sufficiently in environmental RD&D to resolve them in a more timely manner. Perhaps the most outstanding example of this syndrome is the matter of disposal of nuclear wastes.

The solution, while not a total defense against discontinuities in program operation, lies in a serious DOE commitment to the early identification and prioritization of environmental RD&D needs across all programs. As in the case of the environmental planning system currently operating for technology RD&D, careful organization, interdisciplinary participation, and iterative evaluations of current approaches will return benefits far in excess of costs. Although it is too early to pronounce such efforts in the technology area an unqualified success, the system appears to be gathering momentum and working well. Extending the concept of organized, coherent environmental planning to other types of DOE programs, particularly in the regulatory area, emerges as a high DOE/EV priority.

At a more refined level of planning, solutions to the persistent problem of NEPA compliance document scheduling rest on the principle of shared responsibility. That is, all Secretarial Offices in the Department must recognize and respond to their respective NEPA documentation requirements because EV cannot, by itself, discharge DOE's NEPA obligations. First, it should be recognized that unforeseeable downstream events will inevitably constrain the ability of an early planning mechanism such as the EDP to accurately forecast the type and timing of NEPA documents. Second, since program offices are intimately involved with overall scheduling, it is essential that the principal responsibility for initial determinations on document needs be made there, and be made accurately. The program office should be able to recognize whether its proposed action requires an EIS, an EA, or something else. That recognition, however, is unlikely to occur routinely, without EV's providing the necessary document guidance. Improved guidance, together with training, will clarify program office roles and give managers a more realistic understanding of the time required to prepare and review NEPA documents. EV, for its part, can

provide confirmation of the type of document needed and initiate detailed document planning closer to the time the document is needed. Because the ERD/EDP/PEP system cannot be expected to function at that level of specificity, there must be a link between it (and its analogs for regulatory and financial assistance programs) and the EIS (or EA) Implementation Plan process.

G.2.b. Environmental Compliance Documentation Part: As mentioned, most, if not all, of DOE's problems in the NEPA documentation area derive from inadequate environmental planning at both the policy development and program/project planning levels. Some program offices refuse to recognize that NEPA documents are on the critical path for program/project implementation. They express surprise when the need for these documents does, in fact, become critical to moving forward. The resulting crisis and frustration are inevitable, because months or even years of requisite environmental analysis, documentation, and review cannot be compressed into a few weeks. On a higher level, this program- or project-specific planning and management problem is exacerbated by the mistaken perception of NEPA as an impediment to accomplishing the agency's mission. The extent to which DOE can live with NEPA is a function of how quickly decision makers can learn that NEPA-driven environmental analysis is a constructive tool for ensuring their own success.

Four principal mechanisms are proposed to assure functional integration of the Environmental Compliance Documentation Part of the NMS with the rest of the Conceptual Framework. The first is the Implementation Plan for EISs or EAs. These plans confirm or update the earlier determination made in the Environmental Planning Part on the type of documentation needed, the alternatives and issues that should be addressed, and the schedule for preparing the document. The Implementation Plan provides the more detailed substance and logistics for document preparation to complement the EDP or PEP. The second mechanism is the EIS Review Plan, essentially an annex to the EIS/IP, which details the schedule and logistics for document review. Both types of document should be regarded as "contracts" between the program office and EV which may be modified only through negotiation. To the extent that such plans are well prepared and executed, there should be no eleventh-hour crises to delay program or project progress.

The third mechanism addresses another neglected area of NEPA compliance: the agency's continuing commitment to protect the environment, health, and safety once its NEPA compliance document is approved. The approach suggested here is to develop a Mitigation and Monitoring Plan (MMP) concurrently with the EIS. The MMP would be referenced and summarized in

both the final EIS and in the subsequent Record of Decision. The MMP would also become the basis of any environment, safety, and health clauses (ES&H) in contracts used to implement the decision.

The fourth mechanism is needed to make the other three work--improved, program-tailored procedural and substantive guidance on the particulars of the NEPA compliance documentation process.

G.2.c. Program/Project Environmental Implementation and Evaluation Part: In certain respects, DOE's environmental compliance during program/project implementation and evaluation has been good. This is true, by and large, with regard to the design safety and occupational safety and health of technology RD&D projects and for most, if not all, production facilities. However, the environmental impact mitigation and monitoring of even these projects have been deficient in some areas. The regulatory and financial assistance programs, by contrast, have a generally poor record of uneven and ad hoc institution of ES&H protective measures during program/project implementation.

The mechanisms mentioned in connection with the other two parts of the NMS would operate to correct many of these deficiencies. For example, improved environmental planning would set into motion better focused and coordinated environmental control technology RD&D and other ES&H protection programs. Mitigation and Monitoring Plans would provide the conceptual basis for ES&H implementation in DOE programs and projects, whether technology- or regulation-oriented. These plans would not, of course, substitute for the close-in management of ES&H programs which must occur during program or project implementation to assure continual surveillance and fine-tuning. To make certain that such activities occur in DOE programs which use the procurement process, EV and PR are jointly developing a "Management Plan for Integrating Environment, Safety, and Health into Procurement and Contract Activities." Still, this Plan will not address analogous needs in the regulatory programs.

Feedback loops are critically important in the NMS. Information on the actual effectiveness of efforts to resolve environmental problems during program/project implementation must be evaluated and fed back into both the environmental planning and NEPA compliance documentation processes. Such information is essential for planning future environmental RD&D. Perhaps more importantly, it is fundamental to making better policy and other planning decisions.

The use of DOE's environmental RD&D and program/project monitoring to support and improve such planning and decision making is central to the success of DOE's NEPA mission. It has been alleged that research and monitoring results are not being effectively fed back to planning. To the extent that this problem is created by inadequate environmental planning in the first place, it should be remedied by the ERD/EDP/PEP system now being applied to major technology RD&D and products/services programs. To the extent that the problem is created by inadequate mechanisms for interpreting and packaging research results for planners and decision makers, further efforts are required.

G.3. Conclusion

In summary, mechanisms for integrating the various parts of the DOE NEPA Management System among themselves and with the basic DOE functions are either poorly developed or non-existent. The only significant exceptions are in the environmental planning and safety and health follow-through in major technology RD&D and products/services programs. DOE should make the development of the additional linkages needed for comprehensive, balanced compliance with NEPA a high priority. However, the rate at which progress can be made in the NEPA area depends, in part, on achieving overall improvements in the operation of DOE's policy-making and program/project planning systems.

**V. Logistical Considerations
for Implementation of the
NEPA Management System**

V. LOGISTICAL CONSIDERATIONS FOR IMPLEMENTATION OF THE NEPA MANAGEMENT SYSTEM

Implementation of the NEPA Management System described in Chapter IV is clearly not an automatic process. This chapter discusses certain logistical considerations which bear on implementing the NMS: comprehensive guidance and procedures for responding to NEPA, a possible partial decentralization of the review requirements for NEPA compliance documentation, a phased training program for NEPA personnel, and manpower requirements of both EV and program offices.

A. NEPA GUIDANCE DOCUMENTS

To implement the NMS, a family of well-written NEPA guidance documents must be developed and made widely available within DOE. In addition to the CEQ regulations on NEPA, which provide considerable substantive guidance, four other levels or types of NEPA guidance are required:

- DOE regulations or other guidance on the implementation of NEPA
- A more detailed version of DOE Order 5440.1, "Implementation of NEPA," or supplemental orders addressing the particulars of NEPA compliance roles and responsibilities
- Consolidated, agency-wide NEPA guidance and procedures
- Program- or activity-tailored guidance and procedures

The general characteristics of these guidance documents are summarized in Table V-1. Figure V-1 illustrates the relationship of certain principal activities of the NMS project to their development. Each type of document fulfills a particular need which cannot be appropriately addressed by any of the others. The sequence implied by Boxes 1, 2, 6, 7, 8, and 11 seems logical for the preparation of guidance materials. Obviously, DOE can have little or no influence on some of these at this time. The requirements of NEPA, other environmental laws, and the CEQ NEPA regulations are essentially fixed. In addition, because any DOE NEPA regulations must be effective on or about July 30, 1979,

Table V-1 Characteristics of DOE's NEPA Guidance

	DOE'S NEPA REGULATIONS	ORDER	AGENCY-WIDE PROCEDURES	PROGRAM-TAILORED PROCEDURES
Legal Authority	Has force of law - applies to all who have business with DOE (intra- and extra-agency).	Technically binding only within DOE, although outside entities which are not themselves federal agencies would appear to have little choice but to follow DOE procedures when dealing with DOE.	Not binding, although compliance would be generally more convenient than non-compliance. Subject to on-the-spot modification when mutually agreeable to EV and RSO.	Same as for agency-wide procedures, but would apply only within the administrative unit in question.
Role Definition	Generally should define role of DOE as a unit, rather than as subunits. However, some differentiation of EV and RSO roles may be appropriate. Should identify offices which outside entities must deal with. Should reference Order 5440.1, etc.	Should spell out the authorities and responsibilities of EV, RSO, OGC, OSE, etc.	Should spell out procedures in sufficient detail that every significant step can be flowcharted. Should make each information flow, time requirement, decision point, etc., explicit. Should include all information from regulation and order. Therefore, this becomes the DOE NEPA handbook - the one place to go for a total picture of agency-wide procedures.	Same or greater level of detail as agency-wide procedures, but tailored to fit with existing administrative procedures in the unit, provided this is not in fundamental conflict with the agency-wide procedures.
Concurrence Required to Establish	Must go through internal review and concurrence and external comment as outlined in draft DOE Order 2030.	Requires concurrence of other Secretarial Offices.	Requires no concurrence outside EV.	These procedures should be developed by the administrative unit which will be using them (with assistance from EV) and with concurrence from EV.
Technical Detail	Should specify only those matters of substance which will be "immutable," (e.g., general nature of contents of EIS Implementation Plans, Review Plans, Mitigation/Monitoring Plans, etc.).	Little technical detail appropriate.	As much detail as desirable.	As much detail as desirable.

Figure V-1 Summary of the Family of DOE NEPA Compliance Guidance Documents and Principal Considerations in Their Development

publication of a draft would coincide roughly with the publication of this report. These regulations can, of course, be amended at a later time. The draft regulations, although limited in certain areas, are not inconsistent with the basic features of the NMS.

The focus of this discussion, therefore, is on those guidance documents still subject to revision and/or development. The NMS project has revealed the need for some modification to DOE Order 5440.1, "Implementation of NEPA," and extensive revision to the DOE NEPA Guide, discussed below. DOE 5440.1 may need only minor changes, primarily to the requirements for EIS Implementation Plans (Section 4.e.) and the preparation of certain policy and legislative EAs and EISs (Section 5.b.[3]).

The document which currently most fully responds to the need for consolidated, agency-wide procedures and guidance is the "DOE NEPA Implementation Guide," published in September, 1978. Although less than a year old, this document is out-of-date for a number of reasons. First, its preparation preceded promulgation of the CEQ regulations. Second, it should be evaluated in terms of the findings of the NMS project, particularly in the areas of policy and planning, procurements, and mitigation and monitoring. Further, it does not comprehensively outline the procedural requirements of those NEPA-related laws that require review and consultation with other agencies. The Guide should be thoroughly revised to incorporate all the essential information in the CEQ and DOE regulations on NEPA and DOE Order 5440.1, as well as new or more detailed information, so that the user does not have to continually cross-reference multiple sources. Agency compliance should be improved if the responsible officials in the program offices have a single guidance document in which agency-wide requirements are presented in a logical, sequential manner.

Because agency-wide guidance cannot deal with variations in the organizational structure and, thus, the specific roles, responsibilities, and procedures of the program and field offices, program- or activity-tailored procedures for NEPA implementation are also needed to accommodate these differences. The term "program-tailored procedures" should not be narrowly construed; it is also intended to include the policy and project levels and the guidance needs of those non-program Secretarial Offices which may have a supporting role in NEPA compliance. Program- or activity-tailored procedures should:

- Comply with the CEQ regulations on NEPA and with any DOE regulations, orders, and agency-wide procedures on NEPA.

- Apply to a particular Secretarial Office, field office, or other major organizational unit of DOE.
- Be developed by the affected unit, in consultation with NAD, according to guidance provided by NAD.
- Stipulate the NEPA responsibilities of various offices, particularly those for document review and approval and for liaison with EV.
- Require the approval of the appropriate Secretarial Offices and the concurrence of the ASEV.

Several program and field offices already have program- or activity-tailored guidance. However, these documents were developed ad hoc by the affected offices and typically are not fully congruent with DOE Order 5440.1 or the NEPA regulations of DOE's predecessor agencies. Moreover, they do not reflect the new CEQ regulations or related developments in DOE and, therefore, will require thorough revision. In addition, the NMS project has identified the need for program- or activity-tailored guidance in areas where none currently exists.

These various guidance documents should include methods and general criteria for determining impact significance, general descriptions of environmental assessment methods, and references to the detailed literature, as well as procedures for:

- Reviewing issues prior to the development of a formal proposal in order to recognize potential environmental implications
- Using a Preliminary Environmental Checklist
- Assessing cumulative impacts
- Developing an EA Implementation Plan
- Developing an EIS Implementation Plan
- Fully and accurately describing the proposed action
- Determining the range of reasonable alternatives for policy-, program-, and project-level decisions
- Selecting a competent, objective NEPA-support contractor
- Reviewing both in-house NEPA documents and those originating with other agencies

- Developing a Mitigation and Monitoring Plan
- Developing Federal Register Notices (NOIs, NOAs, NOPMs)
- Determining what should be required in Environmental Reports for various kinds of programs
- Using EDPs, PEPs, etc., to link program and project planning with NEPA documentation requirements
- Preparing a Record of Decision

Proper development of the family of NEPA compliance guidance documents depicted in Figure V-1 should lead to the production of appropriate NEPA documents when they are needed, as shown in Box 12. This will prevent costly delays or interruptions in program continuity. More important, perhaps, the documents will reflect appropriate environmental planning so that DOE decisions will be made with full cognizance of environmental implications, and potential environmental impacts will be mitigated to levels that are acceptable to society in light of the potential benefits.

B. DECENTRALIZATION CONCEPTS

The term "decentralization," as used here, refers to the possibility of streamlining the NEPA compliance documentation process by reducing the number of types of NEPA documents that EV has to review and approve. This term should not be confused with the goal of the Under Secretary's memo of January 22, 1979, that project management be placed in the field while program management is to remain at headquarters.

Decentralizing NEPA compliance in DOE has certain advantages. Among its principal benefits are the following:

- Reduction of the workload of EV, and NAD in particular.
- Internalization of NEPA compliance as a normal and proper mode of operation in the program and field offices.
- Shortened in-house review time resulting from a reduced number of reviewing offices.

Arguing against decentralization are the following conditions:

- NEPA compliance has been uneven, at best, throughout DOE and its predecessor agencies, and a central authority to provide explicit guidance may be necessary to assure adequate compliance.
- There is a prevalent, though changing, attitude in many program and field offices that NEPA is a nuisance to be avoided or minimally complied with rather than a positive planning tool to be used to avoid downstream conflicts between national environmental policy and DOE's energy policy and program initiatives. These program and field offices may not be willing to assume more responsibility for NEPA compliance.
- Most of the program and field offices are not adequately staffed to implement a decentralized NEPA compliance program.
- Concurrence in NEPA compliance documents is one of the principal means available to the ASEV for influencing DOE actions. Retaining this authority may be important to EV's effectiveness in assuring Departmental compliance with NEPA requirements.

This section suggests some ways for achieving limited decentralization of NEPA compliance while preserving most of the advantages of both decentralization and the more centralized approach presented in Chapter IV of this report. The phased approach proposed is based on satisfaction of the following conditions:

- There would have to be program- or activity-tailored procedures approved by EV.
- The program or field office would have to designate an office responsible for substantive and editorial quality control for all its NEPA compliance documents.
- The program or field office would have to satisfy EV that it is appropriately staffed to assume the responsibilities in question.
- The program or field office would have to demonstrate, through adequate performance, that it is capable of producing uniformly high-quality NEPA compliance documents and that it will consistently do so without EV's intervention.

Once these prerequisites were met, certification of a program office or field office for partial decentralization would progress through four phases:

- Phase I: As at present, EV would review and concur in all NEPA documents as now designated in Table IV-1 (see Chapter IV.D.4).
- Phase II: EV would delegate review and concurrence of NOIs, NOAs, NOPMs, and EA/IPs to the appropriate office in the program or field office.
- Phase III: In addition to the above, EV would delegate review and concurrence of EIS/IPs and MMPs to the appropriate office in the program or field office.
- Phase IV: In addition to the above, EV would delegate review and concurrence of EAs and FONSIIs to the appropriate qualified program or field office.

In no event would EV delegate review and concurrence in EISS or the decision about the need for an EIS.

In this approach to decentralization, the functions described above would merely be delegated to the program or field offices, not permanently and irrevocably transferred. An office which exhibits a pattern of under-compliance with NEPA could be decertified, after appropriate warning, and EV would resume full review and concurrence functions. After a period of adequate performance, the program or field office could be recertified.

C. TRAINING

By itself, written guidance is insufficient to assure a smoothly functioning NMS because it presents few, if any, opportunities for interaction between those who know the material and those who are attempting to learn it. Therefore, a phased program of instruction is advisable during the initial stages of any effort to implement the NMS.

The first phase would involve a short course on agency-wide guidance for program office NEPA personnel at headquarters. The second phase would involve essentially the same course for field office NEPA personnel. It might be desirable to offer this course in each of the ten federal regions. (In addition, NAD could then work with each program or field office wishing to develop program-tailored procedures and/or become certified for partial decentralization of NEPA compliance.) The third phase of the training program would consist of advising or assisting the program or field office in its own effort to establish a NEPA training program for

program personnel and providing a NAD representative to participate in any resulting short course.

D. MANPOWER REQUIREMENTS

Implementing the NMS will probably require additional staff and/or contractor support for both EV and the program offices. However, the magnitude of any additional manpower requirements is difficult to determine at present because of several uncertainties. One of the major uncertainties is the NMS itself, which is at only the conceptual design stage rather than in detailed design. The further development and refinement of the NMS which is to occur at ASEV's direction in Year Two will facilitate estimation of manpower requirements for its component parts. Another uncertainty which will be clarified in Year Two is the degree to which the work of the existing EV/NEPA staff will be reduced or made more efficient by implementation of the NMS. Finally, it is likely that not all parts of the NMS are equally important. Manpower requirements can be held to acceptable levels by implementing those parts of the NMS that are judged to be most immediately required and delaying implementation of others until resources are more available.

VI. Objectives for Year Two

VI. OBJECTIVES FOR YEAR TWO

The Year Two work effort will focus on further refining, implementing, and evaluating the NEPA Management System developed in Year One. This effort has been grouped into three major work units:

- Continuation of the NEPA Compliance Documentation Process Analysis.
- Completion of the Inventory and Generic Analysis of DOE Programs and Activities.
- Continuation of the NEPA and Policy/Program Planning Analysis.

Each of these individual efforts is described in more detail below.

A. NEPA COMPLIANCE DOCUMENTATION PROCESS

Although responses to Section 102(2)(C) are not the only requirement of the Act, NEPA documents and the system that produces them form the more obvious core of the Department's NEPA compliance system. For that reason, major emphasis will be given to the NEPA documentation process in Year Two.

A.1. Analysis of Existing Guidance and Regulations

The Inventory and Generic Analysis work conducted in Year One has produced a good understanding of the ways in which various DOE units conduct their NEPA business and a familiarity with any guidance documents or conventions they use to plan and prepare NEPA documents. In Year Two, this information will be synthesized with the results of analyses of guidance from predecessor agencies and existing DOE guidance, the requirements of the CEQ regulations, and EV/NAD performance to date. These findings will be used to develop recommendations concerning opportunities for incorporating system-supporting improvements in the various EV guidance materials. Because some of the guidance materials are being revised at this time, much of the work to date and that to be done in the near future has an immediate short-term value. Certainly, continuing work on NEPA implementation procedures will facilitate more rapid development of a consistent, coherent, and responsive hierarchy of NEPA guidance.

A.2. Participation in Guidance and Regulations Development

The institutional strength of NAD is central to an effective NEPA system in the Department. By providing NAD with some basic tools for responding well to its mission, this work unit contributes directly to improving EV's performance in document handling. Current efforts where material has been and can be useful include:

- Continued participation in the development of DOE's NEPA regulations. 10 CFR 1021, now in draft, will be the keystone of the agency's response to Section 102(2)(C) and, as such, should reflect Year One findings on the documentation process as it operates at headquarters and in the field.

Upcoming opportunities include:

- Participation in the development of DOE's regulations responding to Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions."
- Participation in the development of any revisions to Order 5440.1 to further specify the authorities and responsibilities of various DOE offices with regard to NEPA documentation.
- Participation in the development and refinement of basic, agency-wide NEPA procedures which EV can provide to other DOE units. This material could be packaged as a reference handbook.
- Participation in the development of NEPA guidance tailored to the specific needs of various offices throughout the agency.

A.3. Assistance in Training and Orientation

In the course of the investigation, effort will be directed toward identifying opportunities for training or orienting DOE units to assist them in improving the quality of their NEPA documents and achieving greater efficiency in document management. Involvement could include: 1) preparation of training and orientation materials, 2) provision of training and orientation services, and 3) evaluation of training and orientation effectiveness. In addition, we will identify opportunities for any pilot efforts with headquarters or field units that would facilitate the purposes of the work unit.

A.4. Other Efforts

This work unit could also include efforts to help make further operational the internal NAD structure defined last

fall. Principal areas of concern may include, among others, tracking document preparation, review management, and post-document follow-through.

B. INVENTORY AND GENERIC ANALYSIS OF DOE PROGRAMS AND ACTIVITIES

EV's current problems with efficient management of NEPA documents derive, in part, from deficiencies in the quality and completeness of EAs/EISs submitted by other Secretarial Offices. Therefore, while efforts are being made to improve EV's own performance in processing NEPA documents, it is equally important that other units of DOE improve their document preparation performance. The inventories and generic analyses being prepared for each Secretarial Office are valuable tools for achieving that end.

Individually, an Inventory and Generic Analysis (I/GA) provides EV with a complete picture of the activities being conducted in a Secretarial Office. Further, by providing findings on which of those activities are NEPA sensitive, it focuses attention on those program offices which should be generating NEPA documentation. Because the document also addresses the current "NEPA practice" of such offices, it diagnoses any problems within a Secretarial Office with regard to NEPA conformance and provides EV with a basis for developing remedies. Such remedies, however, cannot be effected unilaterally by EV. Only through discussion and negotiation with individual Secretarial Offices on their unique NEPA-related needs can consensus on a plan of action be achieved and implemented. The I/GA can be the basis for dialogue leading to that collaborative effort.

Collectively, the I/GAs provide EV with a means for establishing priorities for work with Secretarial Offices. However significant a program office's NEPA documentation problems may appear in the context of a single Secretarial Office, they may diminish in importance when considered in the context of NEPA performance across the Department. Given limited resources, EV must be able to identify those Secretarial Offices in which an investment in one-to-one discussion can produce the greatest immediate benefit, both in terms of heightening NEPA sensitivity and, more particularly, in terms of improving document flow.

B.1. Completion of First Iteration

The first iteration of the Inventory and Generic Analysis for Secretarial Offices and field elements will be completed in Year Two. As the principal data base for the project, the I/GA is central to work in each of the other two units.

We anticipate no major changes in the approach to I/GA products, although some reformatting to streamline the reports is contemplated.

Headquarters elements for which documentation will be provided include: Controller (CR), Administration (AD), Policy and Evaluation (PE), International Affairs (IA), Energy Research (ER), Environment (EV), Defense Programs (DP), Inspector General (IG), Executive Secretariat (XS), Equal Opportunity (OEO), Committees and Boards (C&B), Economic Regulatory Administration (ERA), Hearings and Appeals (H&A), General Counsel (GC), Energy Information Administration (EIA), Intergovernmental and Institutional Relations (IR), and the Office of the Secretary (OSE). The Federal Energy Regulatory Commission (FERC) will be treated to the extent that it has direct program linkages with Secretarial Offices in DOE such as ERA, RA, etc.

I/GA analyses will also be performed for the following types of field organizations: Operations Offices, Regional Representatives, and units administratively responsible to a particular Secretarial Office, e.g., Power Marketing Administrations and RA. In addition, the field operations analyses will include units of ERA, Energy Technology (ET), Conservation and Solar Applications (CS), EV, ER, DP, IR, EIA, and FERC. These include the National Laboratories, the Energy Technology Centers, and various other R&D or production facilities.

B.2. Report of Findings

When the I/GA is complete, Dalton•Dalton•Newport will provide a first iteration Summary Report. This document will include a compilation of the NEPA-sensitivity findings for Secretarial Office units provided in individual I/GA documents. It will also make recommendations for any changes in approach which would be useful in subsequent iterations. Most importantly, the document will present a prioritized list of program offices requiring additional attention/assistance. This list will be the basis for a recommended EV action plan to improve Secretarial Office NEPA performance.

C. NEPA AND POLICY AND PROGRAM PLANNING

Most basically, NEPA requires DOE to explicitly consider environmental issues in decision making and to make decisions which enhance and protect environmental quality, consistent with the agency's other statutory missions. Therefore, while a system for producing written evidence of

such consideration in the form of NEPA documents is of major concern to EV, the effort to maximize the effectiveness of environmental analyses on Departmental decisions is also of central importance. The Year Two plan addresses the influence of the NEPA process on policy and program formulation in the following ways.

C.1. Examination of Policy Determinations/Program Guidance

In terms of the decision/management systems now developing in DOE, effort will continue to be applied to examining the effects of the NEPA process in general and NEPA documents in particular on policy determinations and program directions. These analyses will seek to identify key decision points in these systems and provide findings and recommendations on the most effective means of introducing environmental considerations on a par with technical and economic data. From such analyses will come specific suggestions for making the products of environmental review more effective as decision tools. For the purposes of this work unit, environmental review includes NEPA documents responsive to Section 102(2)(C); related environmental documents such as ERDs, EDPs, etc.; and the formal and informal interactions between EV and other Secretarial Offices on environmental matters.

C.2. Analysis of Relationship of NEPA to Other EV Functions

The Year Two effort will also examine how the NEPA process influences decisions reached through Department-wide policy-making processes and decisions made within Secretarial Offices about internal programming. Upon completion of the Inventory and Generic Analysis for EV, there will be an analysis of the interactions between EV's conduct of the NEPA process and its other functions: environmental R&D, health effect research, policy analysis, etc. The thrust of the effort will be to identify opportunities for NEPA process contributions to strengthen EV's other programs and, conversely, program contributions to strengthen EV's NEPA process. For example, when an EIS analysis determines that there is insufficient information about the effects of a particular pollutant, that knowledge gap should be considered in the development of EV's research agenda. Likewise, mitigation and monitoring stipulations to be included in NEPA documents should be influenced by information on state-of-the-art environmental control technology.

C.3. Performance of Case Studies

Administratively correct and substantively complete NEPA documents, by themselves, do not constitute a full response to the intent of the law. Good documents used to make better decisions do. To address the issue of document

utility, Dalton•Dalton•Newport will identify some opportunities for detailed case studies of actual decision processes to determine where and how environmental information was or could have been used. This will provide reality checks on selected decision systems and identify required modifications. For example, using the information already developed on PPMS (DOE's primary system for controlling technology development decisions) and the regulations development process, retrospective analyses of the ways in which the NEPA-mandated responsibilities of decision process participants were carried out in energy system acquisition and regulations development initiatives could be performed. From such analyses would come findings on needed process changes to more fully respond to NEPA.

These or other efforts related to examining DOE-wide decision processes could be made on an ad hoc basis or in the form of a program responsive to EV's priorities.

D. SUMMARY

All three of the work units described above support the improvement of document flow since they address NEPA implementation as a system for which all Secretarial Offices and the Department as a whole are responsible. To move documents efficiently, it is necessary to:

- Identify NEPA document needs early
- Build comprehensive implementation plans and schedules
- Track Department-wide document preparation activities
- Organize review activities
- Provide feedback to author offices
- Develop a NEPA follow-through system with decision impact

The Year Two plan provides for assistance in each of these areas.

As in Year One, Dalton•Dalton•Newport expects to be called upon to assist in rapid-response tasks. In some cases, these short-term needs may expand into continuing requirements or require a level of detail not contemplated in the current Scope of Work. Conditions for work on these unforeseeable needs will be determined by further negotiation between the Office of Environment and Dalton•Dalton•Newport.

In the same way that analysis of DOE management documents was essential to developing an integrated NEPA perspective on DOE activities, so other supplemental work appears to have high priority now. Accordingly, the Year Two plan proposes initiating pilot projects, continuing Mod I document analyses, and developing a program to overview implementation of the mitigation and monitoring actions required by NEPA documents. These and other ideas should be explored to continue the development of EV's response to its mission.

Appendices

**A. Initial Criteria and Categorization
of DOE Programs and Activities**

APPENDIX A

INITIAL CRITERIA OF ENVIRONMENTAL EFFECTS AND CATEGORIZATION OF DOE PROGRAMS AND ACTIVITIES

To improve the uneven level of NEPA documentation compliance identified by this project, the NMS developed two tools: The Initial Criteria of Environmental Effects and Categorization of DOE Programs and Activities, both of which are briefly discussed in Chapter IV.D.3.d.(1) of this report. More detail is provided here.

A. INITIAL CRITERIA OF ENVIRONMENTAL EFFECTS

The 109 draft Initial Criteria presented in Working Paper I-2 collectively describe the types of environmental impacts which could be produced by DOE's programs and activities. Their immediate purpose was to support the identification of NEPA-exempt and NEPA non-exempt programs and activities in the Generic Analysis. They can also serve as a tool for sensitizing agency personnel unfamiliar with environmental analysis to the range of concerns applicable to their programs. In addition, they will be used to develop guidance materials supporting NMS procedures in Year Two.

Development of the Initial Criteria began with a thorough review of NEPA-related laws, i.e., NEPA itself and a body of other statutes, regulations, executive orders, and landmark NEPA case law decisions. Like NEPA, many NEPA-related laws require disclosure of planned actions and their environmental effects to other federal agencies and to state, regional, and local agencies for review and comment. They also require mandatory review periods during which the proposed action cannot be initiated. Because of these similarities, NEPA and related laws should logically be administered in a closely coordinated manner. Indeed, the CEQ regulations on the implementation of NEPA (Section 1500.2(c)), issued November 29, 1978, require such coordination.

The aggregated definition of NEPA applies to every component of the NMS project. This definition heavily influenced the development of the Initial Criteria of Environmental Effects and our view of what is included in the phrase "the human environment" as used in NEPA.

The Initial Criteria comprise two major groups, with a number of sub-categories in each:

Natural Systems

Geology
Soils
Water
Air
Biota
Outer Space

Socioeconomic Systems

Service Systems
Housing
Economic Systems
Land Use
Existing Laws and Regulations
Social System Dynamics
Historic and Archaeologic
Features

Each Initial Criterion begins with the phrase "Further environmental review is required if the proposed action has the potential to" This language emphasizes two points:

- Meeting even one Initial Criterion is sufficient to make a program, activity, or project subject to further environmental review under NEPA; and
- The nature of the environmental review is not specified; it need not necessarily be an EIS or even an EA.

There is an important distinction between the use of the Initial Criteria for natural systems and for socioeconomic systems. This distinction is based on the approach of the CEQ regulations on the implementation of NEPA (Section 1508.14), which state:

"Human Environment" shall be interpreted comprehensively to include the natural and physical environment and the interaction of people with that environment. This means that exclusively economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all these effects on the human environment. (Emphasis added.)

Related to the question of impact type is the question of causality. Section 1508.8(b) states, in part:

Indirect effects (are those) which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), economic, social, or health, whether direct, indirect, or cumulative.

Therefore, meeting an Initial Criterion for socioeconomic systems is not sufficient in itself to trigger further environmental review. However, the socioeconomic criteria can define indirect or secondary natural systems effects which do require further environmental review. Figure A-1 depicts the logic for relationships between natural systems and socioeconomic systems Initial Criteria.

B. CATEGORIZATION OF DOE PROGRAMS AND ACTIVITIES

To reduce the full inventory of DOE actions to a manageable number, commonalities among actions were sought. The approach to categorization was based on three criteria. In order of importance, these criteria were:

- Maximize separation of those programs and activities which meet Initial Criteria from those which do not,
- Minimize the degree of overlapping in action categories, and
- Cross-cut DOE organizational units whenever possible.

The first criterion is the most important because the purpose of the categorization effort is to segregate those types of DOE actions which ordinarily are not responsible for environmental impacts from those which are.

This categorization was quite difficult because of the extraordinarily diverse and complex nature of DOE's programs and activities. After trying several different approaches, we finally developed a categorization matrix (Figure A-2) which effectively separates actions that may require NEPA compliance documentation from those that normally do not. The reader should consult the Introduction to Dalton•Dalton•Newport's "Inventory and Generic Analysis of DOE Programs and Activities" for a more thorough discussion of this approach and definitions of the categories. All the matrix cells to the left of the double vertical line indicate NEPA non-exempt actions. The matrix does not indicate which of these may normally require an EIS or an EA; it merely indicates that some type of NEPA compliance documentation is

Figure A-1 Relationships Between Initial Criteria for Natural Systems and Socioeconomic Systems

required. Those categories to the right of the double line are categorically excluded from further NEPA review, thus partially satisfying the objective of categorization.

As indicated by the above discussion and matrix, categorical exclusions are those activities which have no direct controlling influence on the nature, magnitude, or occurrence of any potential environmental impacts stemming from DOE actions. Those activities categorically excluded are:

- a. Data Collection and Analysis
- b. Information Dissemination
- c. Procurement Administration
- d. General Administration
- e. Enforcement

The matrix cells A-1 through J-10 indicate classes of action needing NEPA review. Each has three possible subclasses:

- Actions that normally require an EIS
- Actions that normally require an EA to determine the need for an EIS
- Actions that normally require a preliminary environmental review to determine the need for an EA or EIS. This review involves comparison of the possible effects of the proposed action with the Initial Criteria of Environmental Effects.

Criteria are needed to distinguish among these subclasses. As developed by the NMS project, these criteria include the following:

- An EIS would normally be required for any activity which:
 - a. has a statutory requirement for an EIS,
 - b. must follow a schedule which does not allow sufficient time for preliminary environmental review and/or an EA and is likely to require an EIS in any case, or
 - c. is of such a nature and/or magnitude that the probability of significant environmental impact may be presumed. Significance is to be determined using criteria listed in Section 1508.27 of the CEQ regulations on NEPA.
- An EA would normally be required for any activity which:

- a. has to meet an environmental review and coordination requirement which is tantamount to an EA under some other environmental law or regulation,
- b. must follow a schedule which does not allow sufficient time for preliminary environmental review and is likely to require an EA in any case, or
- c. is of such a nature and/or magnitude that the probability of significant environmental impact is high. Again, significance is to be determined using criteria listed in Section 1508.27 of the CEQ regulations on NEPA.

Applying these criteria to the current inventory of DOE programs and activities results in lists of actions that normally require EISs or EAs. These lists are currently being developed.

**B. The NEPA Management System
and the Procurement Process**

APPENDIX B

THE NEPA MANAGEMENT SYSTEM AND THE PROCUREMENT PROCESS

A. PROCUREMENT PROCESSES

The Office of Environment is mandated by DOE Order 5440.1, "Implementation of NEPA," to "develop procedures for determining which DOE procurements have potential environmental significance, and review all DOE procurement solicitations and resulting contracts determined to have potential environmental significance" (Section 5, a (16))

Satisfying this requirement is an essential goal of the NEPA Management System. Because DOE's procurement processes are complex and because they involve many activities requiring NEPA compliance, these processes are discussed at some length below.

1. Types of DOE Purchases

The complexity of DOE's procurement processes reflects the wide variety of purchases made by the Department. These include:

a. Materials, Equipment, and Supplies: These items constitute the great majority of purchases made by major DOE contractors. Large quantity requirements are not characteristic except in the following areas: materials and equipment for new government-owned facilities; materials and equipment for construction; and materials and equipment to operate and maintain electrical transmission systems, substations, and switching stations.

b. Construction and Architecture-Engineering Services: All types of construction and design, ranging from administrative and auxiliary support buildings to complex industrial and research facilities, are required.

c. Management Services: These include services for the operation of production, research, and ancillary facilities and supporting activities, including transportation.

d. Fuel Processing, Fabrication, and Recovery Services: DOE requires services for the processing of uranium, thorium, or plutonium compounds and alloys; fabrication of fuel elements; and recovery of special nuclear material from scrap.

e. Basic Research: DOE supports basic research in energy-related fields by universities, nonprofit organizations, and commercial concerns.

f. Applied Research and Development: DOE's program requirements for applied research and development are performed by private concerns in their own government facilities, pursuant to DOE contracts.

g. Consultant and Professional Services and Studies: These include computer data, consultant, and professional services in environmental fields, as well as studies in various energy areas.

h. Demonstration Projects: DOE supports demonstration projects to assist the private and public sectors in demonstrating the feasibility of commercializing concepts, processes, equipment, materials, and other devices.

2. Types of Contractual Instruments

DOE uses several different types of contractual instruments to acquire the above goods and services. These instruments are:

a. Contracts: A procurement contract is used when the principal purpose of the contractual instrument is the acquisition by purchase, lease, or barter of property or services for the direct benefit or use of DOE. Contracts are awarded in accordance with the federal procurement regulations and DOE procurement regulations. They may be of any type or dollar magnitude.

b. Purchase Orders: A purchase order is a firm fixed-price instrument for procuring research and development supplies and services from commercial or other sources. It is used when the aggregate amount involved in any one transaction does not exceed \$10,000 or if the item or service is on the GSA schedule, whatever its cost.

c. Interagency Agreements (IAAs): An IAA is a written agreement between DOE and another government agency which sets forth specific tasks to be accomplished by one agency in support of the other. An IAA is designed to clearly specify the work contemplated; reporting requirements; procurement and patent policies; personnel exchanges, when necessary; and arrangements for transferring funds, when applicable.

d. Intergovernmental Agreements (IGAs): An IGA is similar to an IAA but is written jointly by DOE and a regional, state, or local government office.

e. Special Research Support Agreements (SRSAs): The SRSA is used primarily for basic research by educational institutions when DOE support under the agreement does not exceed \$500,000 per year. It specifies DOE's monetary obligation, which is referred to as the support ceiling, and is effective for the initial contract term. If DOE and the contractor agree to extend the contract term, the ceiling on DOE's monetary support may be raised to support the extension. An SRSA may result from an unsolicited proposal.

f. Assistance Instruments: DOE uses assistance instruments to support or stimulate activities and programs by non-federal recipients which are in the national interest. They involve providing financial assistance, property, or services. Assistance instruments may result from a competitive situation in which several proposals are offered for research and development in a particular technical area, or they may result from unsolicited offers. However, they do not include contracts which must be entered into and administered under procurement laws and regulations.

- Grants: The principal purpose of a grant is to provide financial assistance, property, or services to the recipient in order to support or stimulate a public purpose as authorized by federal statute. DOE's role is that of supporting the grantee's project rather than satisfying a DOE operational or program requirement. Preaward review in lieu of contractual controls is considered sufficient to ensure the desired outcome. "Monitoring" connotes an observer's role with rights to revoke or terminate and to make bilateral changes in the scope of the work after award. A grant cannot be used to avoid the advertising and competitive negotiation requirements of federal and DOE procurement regulations where a procurement contract is appropriate; nor can a grant be selected for use in lieu of a procurement contract on the basis of comparative processing times.
- Cooperative Agreements: A cooperative agreement is a partnership or joint venture which is intended to achieve objectives of both DOE and the recipient. In some instances, the parties are jointly responsible for performing the work and/or providing materials or services in order to achieve an outcome of mutual interest and benefit.

g. Field Work Package Proposal and Authorization System (FWPPAS): The Field Work Package Proposal and Authorization System is designed to integrate field work proposals and tasks with DOE planning, budgeting, authorizing, and

monitoring systems. It replaces the Budget Schedule 189 forms and processes.

FWPPAS applies to all work performed by the various DOE multi-program laboratories, energy technology centers, and government-owned/contractor-operated (GOCO) facilities, and by other integrated contractors such as the National Laboratories. The system may also be used at government-owned/government-operated facilities. It is mandatory for all DOE outlay programs except the weapon program. Production and construction programs are also excluded, with the exception of those which currently use Budget Schedule 189 forms and processes. This system does not supersede existing agreements or Memoranda of Understanding with other federal agencies.

Non-integrated contractors are to use the Procurement Request Form PR-799 and related procurement procedures rather than FWPPAS. FWPPAS may not be used to avoid compliance with procurement policies.

FWPPAS is designed to provide contractors with the flexibility required to complete assignments while maintaining needed accountability. It also ensures that contractors' activities are responsive to, and supportive of, DOE program missions.

h. Loan Guarantees: Although they are administered by the Directorate of Procurement and Contracts Management, loan guarantees are technically not procurements.

3. Types of Solicitations and Other Announcements of Interest: Several different kinds of instruments are used to solicit proposals or to announce to potential applicants that support is available. A major distinction is whether the procurement in question is competitive or non-competitive.

a. Competitive Methods: Competitive methods entail formal written invitations to prospective contractors to submit proposals for a specific effort or objective by a particular due date. Competition exists when offerors who can satisfy DOE's requirements independently contend for a contract or grant by submitting priced offers responsive to the objectives cited in the solicitation. Following are specific methods used for competitive procurements or grants:

- Invitations for Bids (IFBs): An IFB is used to solicit bids when detailed specifications are available. Requirements are usually of a hardware or supply nature, and formal advertising procedures are followed. IFBs contain terms and conditions of the procurement, as well as detailed

specifications. Each IFB also sets forth the place, date, and time for the formal receipt and opening of bids. The evaluation and award process is conducted in strict compliance with the IFB and in accordance with the Federal Procurement Regulations (FPRs) as implemented by DOE.

- Requests for Proposal (RFPs): An RFP is used to solicit proposals in response to a broad statement of work; it incorporates performance specifications rather than detailed design specifications. Each RFP sets forth the date, place, and time for the submission of proposals. The evaluation, selection, negotiation, and award process is conducted in accordance with the RFP and appropriate provisions of the FPRs as implemented by DOE.
- Program Opportunity Notices (PONs): A PON is issued to solicit proposals for non-nuclear technological demonstrations in general program areas in which the objective is to accelerate the commercial application of new technologies and systems. These invitations allow DOE to enter into agreements with non-federal entities to demonstrate the technical feasibility, environmental acceptability, and economic potential of technologies on a prototype or full-scale basis. The issuance of a PON may result in the award of many contracts.
- Program Research and Development Announcements (PRDAs): A PRDA permits DOE's program offices to solicit proposals in instances where the need or solution is not sufficiently well defined to permit a traditional, focused, competitive procurement. The primary objective is to solicit ideas from individuals and private and public entities that will serve as a basis for research and development activities in the specific energy field. PRDAs are not used for the conduct of demonstration programs. They are generally limited to situations in which no single contract award is expected to exceed \$2 million. The issuance of a PRDA may result in the award of many contracts.
- Program Announcements (PAs): A Program Announcement is functionally similar to a PRDA, except that it is more specific as to the types of projects the program is intended to fund. It is not restricted to research and development projects,

but may apply to any type of project. Competition among proposers is more focused, and special evaluation and selection procedures must be identified and used. The Program Announcement is patterned after the PRDA. Specific provisions regulate information to be included in the announcement, information to be provided in proposals, and methods and criteria for evaluation and selection. Program terms and conditions, including the desired budget format, are stated in the Program Announcement to permit incorporation by reference in the award.

b. Non-competitive Methods: Non-competitive procurement can result from: (1) an unsolicited proposal to perform research and development work submitted either independently or in response to a Notice of Program Interest, (2) a contract action which is directed toward the contractor deemed to be the sole source capable of satisfying DOE's requirements, or (3) a DOE determination that support or stimulation of a particular research and development effort is consistent with its operational mission. Following are methods of non-competitive procurement:

- Notices of Program Interest (NPIs): An NPI is issued to announce DOE's interest in receiving innovative ideas and techniques applicable to specific problem areas or program objectives involving energy and related technology. An NPI is a communication device that informs potentially interested parties of areas in which submission of unsolicited proposals would be of mutual benefit to DOE and the proposer.
- Unsolicited Proposals: An unsolicited proposal is a written offer to perform research and development work, including feasibility studies, submitted by an individual or organization on its own initiative and not in response to a specific request made by DOE to the proposer. Such proposals are evaluated in terms of technical merit, applicability to the Program Plan, funding availability, and whether acceptance of the proposal can be justified. When an unsolicited proposal receives favorable evaluation and the substance of the proposal is not available to DOE without restriction from another source, the procurement can proceed on a non-competitive basis.
- Sole Source: There are circumstances under which one source has the exclusive capability to perform work within the time required and at reasonable

prices because of experience, specialized facilities, or technical competence. In such cases, the initiating project office may recommend that a contract be negotiated with only that source.

B. PROCUREMENTS AND THE NEPA MANAGEMENT SYSTEM

1. Commonalities Among Procurement Processes and Implications for the NEPA Management System (NMS): For the purposes of the NMS, commonalities were sought among the various procurement processes used at DOE. The following steps may be considered typical of the procurement process, although not all the steps apply to all types of procurements. The relationships of these steps to the different types of procurement described above are presented in Figure B-1. In the brief discussion that follows, opportunities for infusing environmental considerations into the procurement process are identified as part of the NMS conceptual design.

a. Procurement Requests: The procurement process starts with the identification of broad objectives by the program office or field office which are translated into specific needs or requirements. The initial step involves the preparation of a statement of work which describes the requirements of the office in as much detail as possible. This provides the basis for the preparation of a Procurement Request Form which is forwarded to the appropriate buying office for processing.

At the procurement request stage, the program office should consider whether a NEPA compliance document may be required and what other environmental requirements must be fulfilled. These requirements should be designed into the procurement.

b. Solicitation Development: Solicitations are drafted by the program office and are reviewed either in-house or by specially constituted groups such as Solicitation Review Panels and Source Evaluation Boards.

Non-competitive procurements do not involve solicitations, but they are governed by general program guidance documents that set out requirements for information to be included in proposals.

Solicitations and other guidance for potential proposers should include requirements for the preparation of any needed NEPA compliance documents (Preliminary Environmental Checklists, Environmental Reports, and Environmental Assessments. (See Chapter IV.E.4.a.) The solicitation should also include, when appropriate, a stipulation that the contractor's proposal include a description of his approach to compliance with any other environmental requirements.

Figure B-1 Department of Energy Procurements Instruments and Associated Processes

ELEMENTS OF THE PROCUREMENT PROCESS											
PROCUREMENT INSTRUMENT		CONDITIONS	PROCUREMENT REQUEST FORM	EVALUATION OF SOLICITATION	TYPE OF SOLICITATION	TYPE OF RESPONSE	EVALUATION OF RESPONSE BY	SELECTOR	NEGOTIATION	AWARD	
Program Office Prepares Statement of Work (SOW) or Work Package	Contracts	Architect-Engineer	≥ \$10K	799	Program Office	Solicitation for Expression of Interest	Standard Forms 254, 255	A/E Board	SSO	Fee Determined	
		Architect-Engineer	< \$10K	799	Program Office	Solicitation for Expression of Interest	Standard Forms 254, 255	Program Office		Fee Determined	
		Non-Competitive	Sole Source	799	Program Office	NPI	Proposal	Project Officer Writes Justification			
			Unsolicited	799	Program Office	NPI	Proposal	Project Officer Writes Justification	OD/SO/OS		
		Competitive	≥ \$5M (includes MSAs)	799	SRP, SEB	RFP	Proposal	SEB	SSO		
			< \$5M	799	Program Office	RFP	Proposal	Program Office	Senior Program Official		
	Orders	Task Orders		799							
		Quick Reaction Work Orders		799							
		Purchase Orders ≥ \$10K		799							
		Other Orders		799							
	Agreements	Special Research Support Agreements (Sole Source, > \$500K)				PRDA, PON					
		Interagency and Intergovernmental Agreements									
		Other Agreements									
	Financial Assistance	Grants	Non-Competitive (Formula)	799	Program Office	Solicitation	Application	Program Office	Senior Program Official		
			Competitive	> \$5M	799	SRP, SEB	RFP	Proposal	SEB	SSO	
				< \$5M	799	Program Office		Application	Program Office		
		Direct Loans									
		Cooperative Agreements	≥ \$5M		SRP, SEB	RFP	Proposal	SEB	SSO		
			< \$5M								
	Loan Guarantees					(Public Notice)	Application	Informal Committee	SO/OS		
FWPPAS (Schedule 189 Process)			N/A	N/A	N/A	(Field Work Package & Task Proposal/Agreement Forms)	(Program Divisions/Projects)	(Program Sponsor and SO)		(Work Authorization Order)	
Corresponding IPMIS Element			Procurement or Financial Assistance Request Number, PRN	Solicitation Business Instrument Number, BIN			Award Business Instrument Number, BIN				

ABBREVIATIONS USED:

BIN - Business Instrument Number
FIS - Financial Information Number
FWPPAS - Field Work Package Proposal and Authorization System (Replacing Schedule 189 Process)
IPMIS - Integrated Procurement Management Information System
MSA - Major System Acquisition
NPI - Notice of Program Interest
OD - Office Director
OS - Office of the Secretary
PON - Program Opportunity Notice
PRDA - Program Research & Development Announcement
PRN - Procurement Request Number
RFP - Request For Proposal
SEB - Source Evaluation Board
SO - Secretarial Officer (Assistant Secretary Level)
SRP - Solicitation Review Panel
SSO - Source Selection Official:
Under \$5M = Senior Program Official
\$5-\$10M = Office Director
\$10-\$50M = Secretarial Officer
Over \$50M = Secretary, Deputy Secretary, Under Secretary

N/A - Not Applicable

Items in parentheses are not formal procurement procedures.

The CEQ regulations on NEPA require that the federal agency independently evaluate any applicant-supplied data. The relevant sections state:

If an agency requires an applicant to submit environmental information for possible use by the agency in preparing an environmental impact statement, then the agency should assist the applicant by outlining the types of information required. The agency shall independently evaluate the information submitted and shall be responsible for its accuracy. If the agency chooses to use the information submitted by the applicant in the environmental impact statement, either directly or by reference, then the names of the persons responsible for the independent evaluation shall be included in the list of preparers (§ 1502.17). It is the intent of this subparagraph that acceptable work not be redone, but that it be verified by the agency. (1506.5 a)

If an agency permits an applicant to prepare an environmental assessment, the agency, besides fulfilling the requirements of paragraph (a) of this section, shall make its own evaluation of the environmental issues and take responsibility for the scope and content of the environmental assessment. (1506.5 b)

To this end, the NMS Conceptual Framework includes the concept of an Independent Verification Report (see Chapter IV.E.3.b.(3)).

c. Contractor Responses: Potential contractors, grantees, etc., respond to DOE solicitations or notices of support availability by preparing and submitting proposals, applications, or Standard Forms 254 or 255.

Where necessary, the contractor should submit with his proposal any required Preliminary Environmental Checklist, Environmental Report, or Environmental Assessment. The proposal should explain the contractor's approach to compliance with any further environmental requirements.

d. Evaluation of the Response: Several different mechanisms are available for evaluating contractor responses, including formal or informal committees within the program office, an A/E Board, or a Source Evaluation Board organized by the Directorate of Procurement and Contracts Management (PR). The larger and more complex procurements require one or another of the formal board evaluations.

An essential element of the NMS is that proposals involving actions with the potential for significant environmental impact should be evaluated on the basis of environmental information as well as technical merit and cost.

The NMS Conceptual Design includes the preparation of EAs or FEISSs prior to the decision to award contracts, whenever such documents are needed. The CEQ regulations on NEPA seem quite clear on this point. Salient portions are quoted below.

- Section 1502.2(f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (§ 1506.1).
- Section 1502.2(g) Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.
- Section 1502.5(b) For applications to the agency appropriate environmental assessments or statements shall be commenced no later than immediately after the application is received. Federal agencies are encouraged to begin preparation of such assessments or statements earlier, preferably jointly with applicable State or local agencies.
- Section 1506.1(a) Until an agency issues a record of decision as provided in § 1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would:
- (1) Have an adverse environmental impact; or
 - (2) Limit the choice of reasonable alternatives.
- Section 1506.1(b) If any agency is considering an application from a non-Federal entity, and is aware that the applicant is about to take an action within the agency's jurisdiction that would meet either of the criteria in paragraph (a) of this section, then the agency shall promptly notify the applicant that the agency will take appropriate action to insure that the objectives and procedures of NEPA are achieved.

Section 1506.1(c)

While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

- (1) Is justified independently of the program;
- (2) Is itself accompanied by an adequate environmental impact statement; and
- (3) Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.

Section 1506.10
(in part)

(a) The Environmental Protection Agency shall publish a notice in the FEDERAL REGISTER each week of the environmental impact statements filed during the preceding week. The minimum time periods set forth in this section shall be calculated from the date of publication of this notice.

(b) No decision on the proposed action shall be made or recorded under § 1505.2 by a Federal agency until the later of the following dates:

(1) Ninety (90) days after publication of the notice described above in paragraph (a) of this section for a draft environmental impact statement.

(2) Thirty (30) days after publication of the notice described above in paragraph (a) of this section for a final environmental impact statement.

Furthermore, existing and/or customary agency procedures, such as procurement regulations which may conflict with the above requirements, must be revised unless there is an explicit statutory basis for such practices which is

irreconcilable with NEPA. This is well established in NEPA case law, as well as in the CEQ regulations (Section 1500.6):

Each agency shall interpret the provisions of the Act as a supplement to its existing authority and as a mandate to view traditional policies and missions in the light of the Act's national environmental objectives. Agencies shall review their policies, procedures, and regulations accordingly and revise them as necessary to insure full compliance with the purposes and provisions of the Act. The phrase "to the fullest extent possible" in section 102 means that each agency of the Federal Government shall comply with that section unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible.

The CEQ regulations do permit at least one approach to procurement which may be more acceptable to DOE than the above suggests. Section 1506.1(d) states, in part:

This section does not preclude development by applicants of plans or designs or performance of other work necessary to support an application for Federal, State or local permits or assistance.

This suggests that DOE could postpone publishing an FEIS through the design phases of an energy system acquisition project provided it does not foreclose any of its reasonable alternatives. Because of the expense involved in detailed design work, DOE might find it desirable to limit this postponement to the conceptual design phase of a project. Contracts could be awarded to all applicants who offer technically acceptable and competitive proposals for conceptual design work. The contractors would be required to submit data needed for an EIS concerning the decision as to which conceptual design to fund for further development. The FEIS would be completed by DOE prior to that decision. A further consideration which recommends this approach is that there may be little basis, at least environmentally, for selection among the competing proposals prior to conceptual design. It remains to be seen whether this approach is more attractive to DOE than earlier preparation of an FEIS in order to enable DOE to select a single contractor for conceptual design work.

2. Examples of the Approach Recommended

a. Source Evaluation Board Process: Figure IV-9 in Chapter IV.C.3.b.(2) outlines the source selection process, based on descriptions from the documents themselves. Places

where EV assistance and involvement fit most appropriately are indicated by shading. Recommended EV membership roles and advisory roles are also shown.

The solicitation is drafted by the program officer with the help of the designated procurement officer. It is submitted to the Procurement Office along with the Procurement Request Form (DOE Form PR-799). The draft solicitation is reviewed by the Small Business Procurement Specialist and a representative from the Small Business Association Procurement Center for the potential award of contracts to small businesses, minority businesses, and firms located in labor surplus areas (IMD 0705). After review and approval, a copy is returned to the appropriate procurement contracting officer.

As early as possible after the initial drafting of the solicitation for a major procurement program, a Business Strategy Group (BSG) is formed to develop an acquisition strategy for the proposed procurement (IMD 0708). It is at this point that any general environmental issues may be identified. Environmental concerns and alternatives may have already been described in an environmental assessment or an impact statement if the program went through proper NEPA procedures in the programmatic stage.

For programs and projects expected to exceed \$5 million (for all contracts and all years), the draft solicitation is sent to the Director of Procurement and Contracts Management. A Source Evaluation Board (SEB) is established for each program or project.

The Director of Procurement and Contracts Management names the board (and ex-officio members and advisors), subject to the approval of the designated Source Selection Official (IMD 0706). The SEB reviews and approves the draft solicitation and forwards it to the Solicitation Review Panel (SRP) (IMD 0707). This panel reviews and approves the solicitation.

While the SRP is reviewing the solicitation, the SEB is finalizing the source list, rating plan, and Commerce Business Daily (CBD) announcement. The approved solicitation from the SRP is returned to the SEB for modification and final approval. It is then ready to be released to the public.

Proposals are submitted to DOE in response to the solicitation. After receipt, the proposals are reviewed by the SEB. Members present the Source Selection Official (SSO) with findings, ratings, or rankings of the proposals; however, they cannot recommend selection of a contractor. The SSO then holds an executive session with senior staff and chooses a single source.

Figure IV-9 also indicates recommended areas of EV participation and assistance. Highlights are as follows:

- Business Strategy Groups (BSGs): When DOE actions involve major procurements for which BSGs are formed, it is assumed that there will be a potential for generating environmental impacts. An EV representative should have the opportunity to serve in an advisory capacity on the BSG to assist in the identification of potential concerns to be included in timing and funding strategy.

In the few cases in which the BSG anticipates no environmental impacts, the EV advisor can offer confirmation or provide additional information.

- Source Evaluation Board (SEB): This may be the most crucial point for EV involvement in the procurement process. EV should have a representative in attendance as a member of the SEB in its review. If the environmental information provided by the various offerors is to influence selection, someone who is able to evaluate such information must participate in the SEB. If no environmental issues are identified in the proposal by EV, the EV member can minimize his role on the SEB for that procurement.
- Solicitation Review Panel (SRP): The draft order replacing IMD 0707 includes a representative from the Office of Environmental Compliance and Overview as a member of the Solicitation Review Panel. This addition is welcome and appropriate. However, the revised document still does not address the need for information for environmental consideration. This includes NEPA documentation milestones, timing, and funding requirements. EV participation on the SRP should not preclude its participation on the SEB.

In addition, EV should provide PR with a consistent and usable set of guidelines and criteria to assist in making environmental determinations. A handbook could be developed by EV in consultation with PR. The handbook would outline the environmental issues for consideration by the procurement officer, program officer, BSG, SRP, and SEB at each point in the source selection process.

b. Support Service Procurements: DOE Order 1370.1 establishes DOE policies and procedures for the procurement of support services, of which there are three categories: Technical Support Services, which assist in technology

development; Management Support Services, which improve the operation and management of the DOE organization; and Maintenance Services, which include housekeeping, maintenance, and security. DOE Order 1370.1 establishes a three-year limit on these contracts and a five-year limit for the performance of work. It excludes from coverage regular research and development contracts, architecture and engineering services, construction and construction management services, operating and on-site service contracts, and production contracts. Support service contracts may not be processed through the Schedule 189 budget procedure. When a proposed support service is to be contracted with another federal agency, it is governed by an Interagency Agreement (IAA).

Figure B-2 summarizes the review and approval procedure described by DOE Order 1370.1 for support service contracts. It also indicates recommended points in the process for environmental consideration. DOE field organizations and organizational units should consider potential environmental issues in their initial preparation of support contract requests. In the development of support service contracts, examination of environmental issues is important, especially for those contracts involving technical support. Such contracts may include design feasibility, performance characteristics, trade-off analyses, or system review. Maintenance and operations services may also involve environmental issues such as waste disposal or pesticide use.

The DOE organizational unit or field organization preparing the request should refer to EV for any necessary clarification of issues, a process similar to the present confirmation with the Controller of availability of funds.

Review of support service requests greater than \$250,000 by the Director of Administration should also include environmental consideration.

A final check for environmental issues should occur when the headquarters or field procurement unit processes the contract.

Figure B-2 Review and Approval of Support Service Procurement Requirements
(DOE Order 1370.1)

3. Role of the Integrated Procurement Management Information System (IPMIS) in the DOE NEPA Management System*

a. Description: The Integrated Procurement Management Information System (IPMIS) is a computerized procurement and financial assistance reporting system. It is in the process of replacing the three existing procurement information data bases: Procurement Execution Plan (PEP), Procurements in Process System (PIPS), and Contract Information Systems (CIS), which are described in IMDs 0704, 0701, and 0703, respectively. Figure B-3 shows the system in a simplified flow chart and indicates where these three superseded systems fit into the total new system.

According to the "Integrated Procurement Management Information System (IPMIS) Detail Design Report," IPMIS is to be a comprehensive procurement system which tracks procurement and financial assistance management information through the stages of procurement planning, procurements in process, and award administration for each procurement action. In addition, IPMIS will interface with DOE's Financial Plan System (FPS), Funds Tracking System (FUNTS), Financial Information System (FIS), Business Management Information System (BMIS), Field Office Reporting System (FORS), Procurement Operations Management Information System (POMIS), and the System for Proposal Information Network (SPIN).

The IPMIS data base will contain detailed and summary data for all procurement and financial assistance actions in excess of \$10,000, and summary data only for actions under \$10,000. Projects totaling \$5 million or more, in addition

*Information for this discussion comes from three sources:

- 1) "Integrated Procurement Management Information System (IPMIS) Detail Design Report," U.S. Department of Energy, Directorate of Procurement and Contracts Management, no date.
- 2) "A Guide to Preparation of DOE Procurement and Financial Assistance Request Forms," U.S. Department of Energy, Directorate of Procurement and Contracts Management, October, 1978.
- 3) "A Guide to Reporting Progress on DOE Procurement and Financial Assistance Requests in Process," U.S. Department of Energy, Directorate of Procurement and Contracts Management, October, 1978.

to being tracked by IPMIS, must also go through the source selection and Source Evaluation Board process.

The IPMIS flow chart (Figure B-3) shows the relationship of the different procurement stages tracked by the system to the source selection process for major procurements. The planning stage of the procurement process starts with the development of the procurement execution plan by the program or field office. The IPMIS data for this stage of the procurement process are provided by the Procurement/Financial Assistance Plan Forms, PR-XXX A, B, and C. These forms are filled out by the program or field office, with the assistance of PR, and must be approved by the program manager or head of the field office before being forwarded to PR and entered into IPMIS.

Approval of the Procurement/Financial Assistance Plan is dependent upon the determination that funds have been allocated through the DOE budget process for the procurement action. Appropriately, IPMIS is linked to the Financial Plan System (FPS). Business Strategy Groups may be convened whenever the program office defines a need. This is usually done at the program level before any specific procurement actions have been initiated, but it can also be done after the specific procurement plan has been drafted.

A box on the Procurement/Financial Assistance Plan Form requires a determination of which source selection category will be used for the procurement action. These categories include: "Architecture-Engineering," "Source Evaluation Board," "Other," and "None." The determination is made by the program or field office, with the assistance of PR, according to the funding level and type of procurement action. In the case of major procurements (over \$5 million), a Source Evaluation Board is required.

Once the procurement action is initiated, the procurement-in-process phase begins. The Procurement/Financial Assistance Request Authorization Forms (PR 799A, with B and C as needed) provide the data for this phase of IPMIS. Again, the form must be approved by the authorizing official before it is forwarded to PR and entered into the system. As the procurement progresses, additional forms (PR 799 D-H) are prepared, depending on the type of procurement.

Submission of Form PR 799A triggers establishment of a Source Evaluation Board (SEB) for major procurements. This board, along with the Solicitation Review Panel, reviews and completes the Request for Proposal (RFP). The SEB distributes the RFP and is responsible for reviewing proposals from industry and recommending a source to the Source Selection Official. The Source Selection Official then chooses a single source.

Figure B-3
Integrated Procurement Management Information System (IPMIS) - for Procurement & Financial Assistance Actions over \$10,000

¹ For procurements under \$10,000, data are presented in summary form only.

² Authorizing Official=Cognizant Program Manager or Head of Field Office.

³ See "Analysis of Department of Energy Guidance Documents for Responsiveness to the National Environmental Policy Act," Part II, October, 1978; Dalton-Dalton-Newport

Recommended addition of Environmental Information to form PR-799A.

The contract is then negotiated with the designated source and awarded by the awarding program office. This action begins the award phase of the procurement action, which is tracked by IPMIS via a third series of forms. The Procurement/Financial Assistance Award Forms are filled out by the program office. As before, these new data are submitted to PR and entered into IPMIS. This system then tracks the contract until it is completed and closed out.

b. NMS Findings: Although IPMIS is primarily an information and support system, it has potential for use by EV as a program management tool to identify and track procurement actions of particular environmental interest.

For major procurements (over \$5 million), this can be done most effectively through EV's participation in the formal solicitation preparation and source selection process. This includes Business Strategy Groups, Source Evaluation Boards, and Solicitation Review Panels, all of which have been discussed earlier in this section. However, there is no formal review process for solicitation preparation or for source selection for procurements under \$5 million. Since these procurements may also result in actions which have the potential to generate environmental impacts, EV may wish to use IPMIS as a vehicle to explore a way of identifying and tracking these procurement actions as well.

To identify and track procurement actions of particular environmental interest through IPMIS, EV should consider discussions with PR regarding the addition of a box to the Procurement/Financial Assistance Request Authorization Form 799A, which initiates a procurement action. This box would be filled in by the program officer and would indicate whether the action described in the procurement could be expected to cause significant environmental impacts, and, if so, whether appropriate NEPA documentation has been or is to be prepared.

EV could use this information to monitor ongoing procurements and to track NEPA documentation, in accordance with its mandate. Information from IPMIS could be very valuable to EV in assessing the magnitude of NEPA documentation efforts throughout DOE. It could provide a single source for cross-checking information received through other channels regarding the status of NEPA documentation, and it could provide data about the extent of environmentally sensitive actions under consideration by DOE.