

*Development of a Management System for
Implementing the NEPA Process in the Department
of Energy*

Executive Summary

**Year One Technical
Progress Report**

April, 1979

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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.

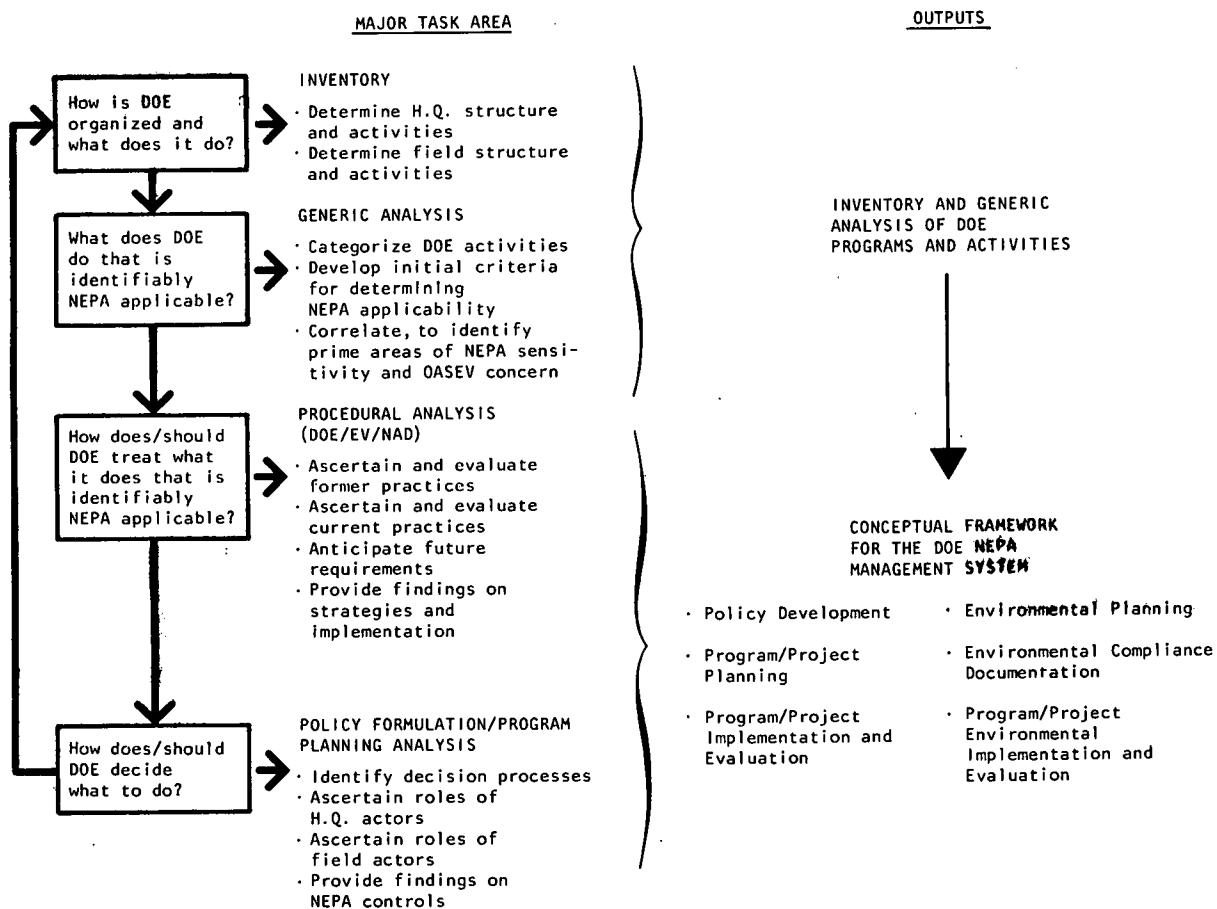
B. APPROACH

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.

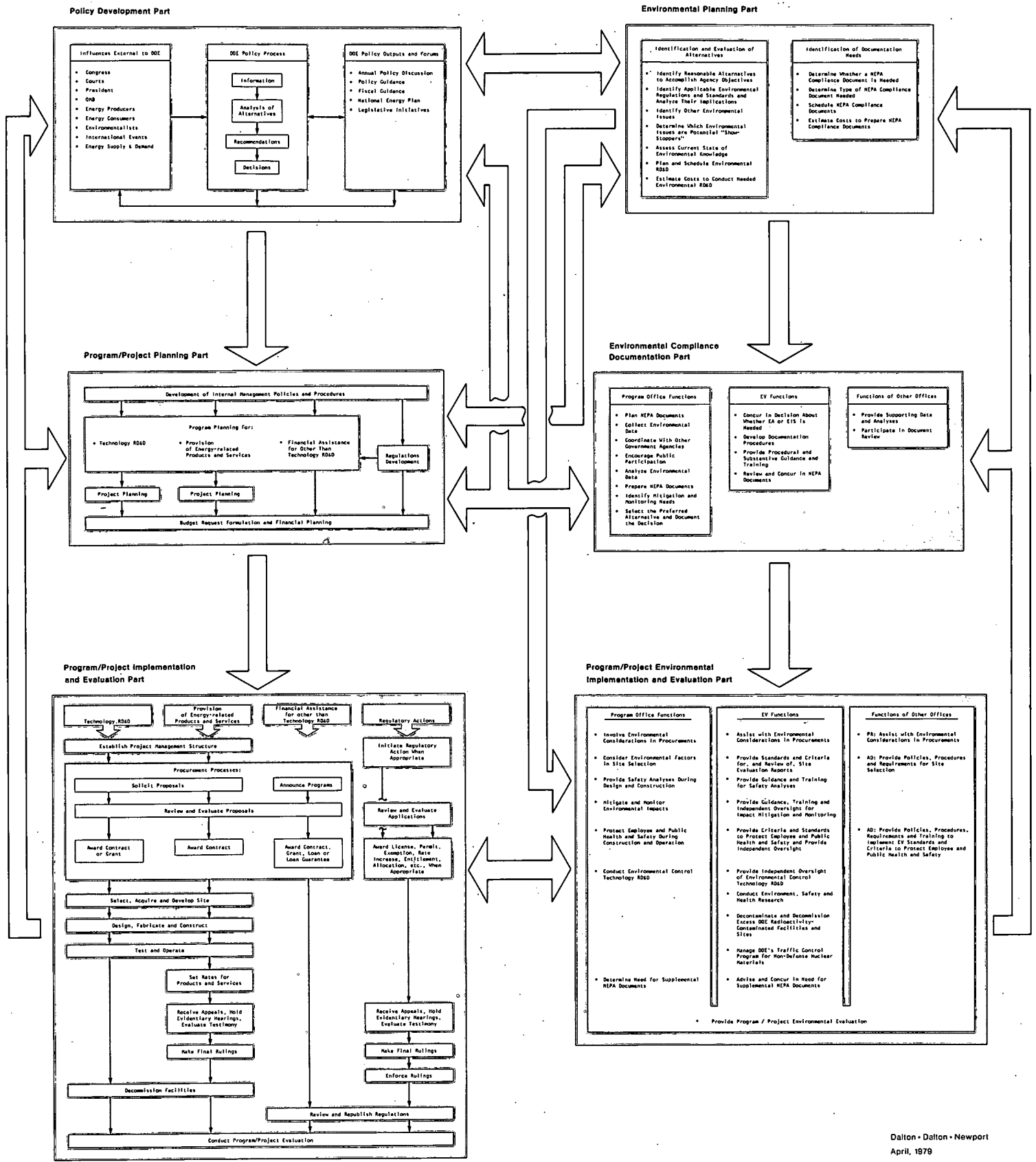
D. PRINCIPAL FINDINGS

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.

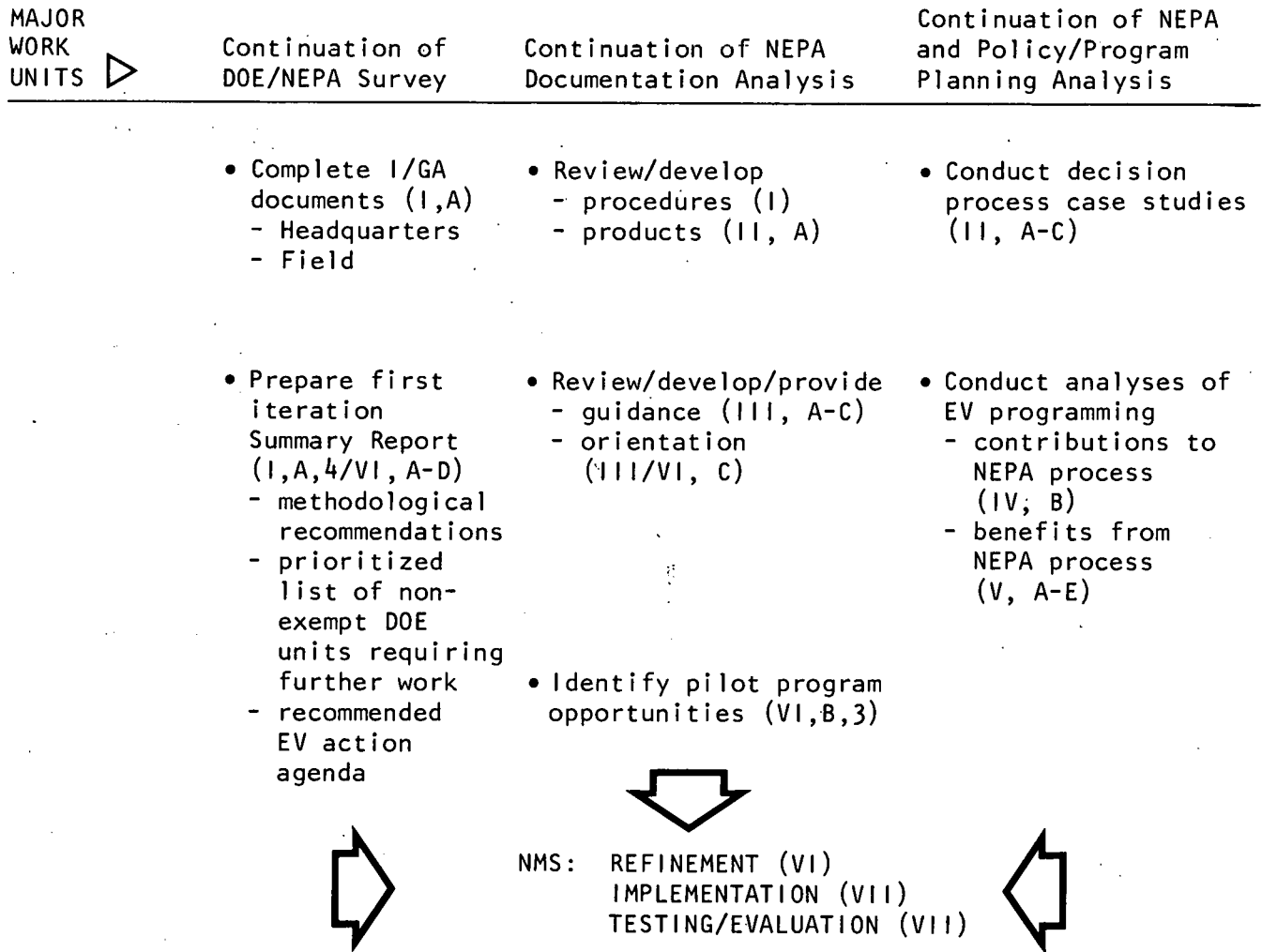
E. YEAR TWO EFFORTS

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 1-3 Generalized Year Two Work Plan



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

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.