

CONF-960648--2
SAND--94-2822C

RECEIVED

APR 08 1996

OSTI

TOOLS FOR NEPA COMPLIANCE: BASELINE REPORTS AND COMPLIANCE GUIDES

Theodore A. Wolff, Ph.D., Sandia National Laboratories, Albuquerque, New Mexico*

Roger P. Hansen, JD, Hansen Environmental Consultants, Englewood, Colorado

ABSTRACT: Environmental baseline reports and compliance guides are not included in the definition of "environmental document" in the Council on Environmental Quality's (CEQ's) regulations on implementing the National Environmental Policy Act (NEPA). Nevertheless, these documents are essential tools for effective NEPA implementation. This paper describes these tools, discusses their contents, and explains how they are used to prepare better NEPA documents more cost-effectively. The focus is on the experience at Sandia National Laboratories in New Mexico (SNL/NM), a U.S. Department of Energy (DOE) multiple-mission facility.

"Environmental baseline" refers to the existing physical, biological, and socioeconomic environment before it is altered (beneficially or adversely) by the program or project being proposed by a federal agency. The baseline consists of data on a wide diversity of parameters (for example, air and water quality, hydrology, meteorology, cultural resources, sensitive species, and socioeconomics). The presentation of these data in the "affected environment" sections of an environmental assessment (EA) or environmental impact statement (EIS) can be tailored to focus on "significant" environmental issues. This would eliminate the verbose, encyclopedic baseline information that infects many NEPA documents. The environmental baseline report, such as that published by SNL/NM in 1993 and updated in 1996, provides a "building block" with which succinct and more readable NEPA documents can be prepared. The baseline report is a "living document" in that it can be revised and updated as circumstances dictate.

Another essential tool for preparing better documents that are less vulnerable to legal challenges is the comprehensive NEPA compliance guide. Surprisingly, very few federal agencies have an all-encompassing document that provides detailed guidance not only for CEQ requirements but also for the agency's own internal NEPA compliance procedures. The compliance guide serves as a "road map" for NEPA practitioners who must search through the complex maze of NEPA-related statutes, regulations, executive orders, other guidance documents, and court opinions. Sandia initially prepared a draft omnibus NEPA Compliance Guide for its sites in 1989; a third edition was published in August 1995. The guide is used by line organization managers, project managers, NEPA professionals, and those with NEPA compliance responsibilities at SNL facilities. It supplements, but is not a substitute for, CEQ as well as DOE NEPA regulations as well as DOE orders and policy statements.

* This work was supported by the United States Department of Energy under Contract DE-AC04-94AL85000

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

MASTER

1.0 INTRODUCTION

In these days of increased budget consciousness and cost-cutting, federal agencies are concerned about the cost-effectiveness of their National Environmental Policy Act (NEPA) documentation process. There is increased emphasis on making the NEPA process more relevant to decision making while adequately protecting the human environment. For example, U.S. Department of Energy (DOE) Secretary Hazel O'Leary issued a "Secretarial Policy on the National Environmental Policy Act" in June 1994. The transmittal memorandum stated:

Full compliance with the letter and spirit of [NEPA], our national charter for protection of the environment, is an essential priority for the Department of Energy, consistent with our core values. We are fully committed to pursuing excellence in all areas of environment, safety, and health, including NEPA activities The NEPA process is a valuable planning tool and an opportunity to improve the quality of the Department's decisions and build public trust We must approach NEPA as a team ensuring quality and improving efficiency and thereby making NEPA work better and cost less. (DOE 1994)

The policy statement is intended to "streamline" the NEPA process, minimize cost and time expended on document preparation, emphasize teamwork, and make the NEPA process more useful to decision makers and the public.

This paper discusses two principal tools used by Sandia to prepare more efficient, effective, and legally defensible environmental assessments (EAs) and environmental impact statements (EISs). These tools are: (1) the "environmental baseline" document (EBD); and (2) the NEPA compliance guide (Guide). These documents are, of course, not included in the CEQ's definition of "environmental documents" that includes only EAs, EISs, Findings of No Significant Impact (FONISs), and Notices of Intent (NOIs) (40 CFR §1508.10).

2.0 THE ENVIRONMENTAL BASELINE DOCUMENT

SNL/NM initially published an omnibus EBD in 1993 (IT Corporation and Consensus Planning, Inc./Zephyr Design 1993). Currently, the document is being extensively revised and updated. It is intended as a "living document" and will be periodically updated to reflect the current status of Sandia's environmental conditions at its New Mexico facility. Although many "baseline" conditions change only very slowly over time (e.g., geology, geomorphology, hydrology, and climate), new or better sources of information may be discovered that necessitate major revisions. Also, some parameters like air quality, water quality, and land use may change relatively quickly.

2.1 Environmental Baseline Defined

"Environmental baseline" refers to a comprehensive compilation of information on the existing physical, biological, and socioeconomic environment before it is altered by the proposed federal program or project to be addressed in an environmental impact assessment. The EBD essentially provides a "one-stop shopping" source for information that will be used in preparation of the "affected environment" section of the EA or EIS. The SNL/NM EBD contains detailed information on a number of environmental parameters: geology (including geomorphology, seismology, and paleontology), hydrology, climate and meteorology, ecology (including threatened, endangered, and sensitive species) air quality, noise, cultural resources, visual resources, socioeconomics/demographics, and land use.

In addition, the EBD contains information required to address key "issues" such as environmental justice, conformance of ambient air quality with state implementation plans (SIPs), radionuclide airborne effluents, economic effects, and other issues peculiar to the SNL/NM facility. All EBD information is not directly related to describing the affected environment. The EBD also includes other "baseline" information that those preparing NEPA documents will find useful: background information on the current and early history of the site; commonly used acronyms and abbreviations; references; a glossary; examples of recommended mitigation measures; an annotated bibliography; and a list of contacts. There is also a section on computer-based models used to estimate environmental impacts. Because applicable environmental laws and regulations are frequently discussed or cited erroneously in NEPA documents, an extensive review of other federal environmental laws and their relationship to NEPA is included in the EBD.

2.2 Purpose and Scope

The purpose of the EBD is to provide a comprehensive primary source document for preparation of a description of the "affected environment" as required by the Council on Environmental Quality (CEQ) regulations in 40 CFR §1502.15 for preparation of EISs. Although the definition of an EA in 40 CFR §1508.9 does not specify that a description of the affected environment be included in the content, the required environmental impact analysis would not be possible without it. Thus, the EBD is useful for preparing both EISs and EAs.

Environmental baseline documents are site-or facility-specific; they do not have a broad or universal application. Thus, the scope of the EBD depends on the nature of the environment to be affected by a proposed action at a specific facility, e.g., SNL/NM or the Kauai Test Facility (KTF) in Hawaii. For example, a site or facility that has no natural habitat would not require baseline information on threatened and endangered species. Almost any large federal government installation would require a broad-scope EBD that would include parameters that are frequently ignored such as visual resources, noise, and minority or low-income populations. The table of contents of a broad-scope EBD serves as a useful checklist of the "affected environment" parameters that may be relevant to a particular action.

The description of the affected environment varies (or should vary) with every EA or EIS, depending on the relevance and importance of each environmental parameter. For example, existing ambient noise levels are not equally relevant to a proposed transmission line and a proposed airport. Visual resources may be a critical issue in the placement of a large gasoline storage tank but have no bearing on the renovation of a computer center. Each description of the affected environment must be "custom made" for a particular proposal. The environmental parameters that *would be affected by* (e.g., air and water quality) and that *would affect* (e.g., seismology or flash flooding) the proposal should be described for all alternatives including the proposed action.

It would be a great mistake to include the entire contents of an EBD in every NEPA document. According to the CEQ regulations, the EIS (or EA) should succinctly describe the affected environment with the data and analysis being "commensurate with the importance of the impact" (40 CFR §1502.15). Agencies must avoid "useless bulk" because "verbose descriptions" do not measure the adequacy of a NEPA document (40 CFR §1502.15). It is of critical importance that the environmental description in any EA or EIS be *closely linked with and confined* to data that is highly relevant to the impact assessment. Too frequently, preparation of the "affected environment" sections of NEPA documents result in bulky, irrelevant, and encyclopedic minutiae.

2.3 Using the Environmental Baseline Document to Save Time and Cost

In describing the affected environment for NEPA documents, two common errors occur with predictable regularity: (1) reinventing the wheel, and (2) successive repetition of previous documents. The first error is probably the most common. When reinventing a description of the affected environment, authors survey the same research landscape as their predecessors while recreating the description of each environmental parameter virtually from scratch. Frequently, the description of environmental parameters prepared only last week for a similar proposed action at the same facility is completely ignored. The reinventing the wheel exercise is appropriate for NEPA compliance managers with idle staffs and limitless budgets.

The "flip side" of reinventing the wheel is the successive repetition of previous documentation. This approach demands that previous environmental baseline descriptions, regardless of the parameter, be repeated almost verbatim in successive documents. The original author is assumed to have been infallible. This practice ignores the possibility that the characteristics of the parameter may have changed radically since the original document was prepared. Also, the description may be totally unsuitable for the current proposal in terms of context, emphasis, or level of detail.

Both of these errors are fraught with, at the least, professional embarrassment and, at the most, a court challenge. Such outdated and inept baseline descriptions result in impact analyses that are based on erroneous

assumptions. They also create false information about the "no action" environmental condition and other alternatives. While neither the reinventing the wheel nor the documentation repetition syndromes will be entirely eliminated by having an EBD available, the existence of a single omnibus source document can greatly reduce the waste of human and financial resources and lessen the risk of public opposition or legal challenges.

2.4 The Environmental Baseline Document at Sandia

The EBD has been used extensively at SNL/NM. Since it was published in 1993, it has been employed in preparing the description of the affected environment for at least ten EAs and one EIS. It is also used routinely for preparation of various types of environmental permitting documents. For example, the EBD discussion of other federal laws and regulations that apply to SNL/NM operations is a valuable source of information for permitting specialists. Recently, the EBD was used for preparing the "Draft Programmatic Environmental Impact Statement for Stockpile Stewardship and Management" (DOE 1996). The EBD will also facilitate the preparation of a SNL/NM site-wide EIS (SWEIS).

2.5 Steps In Preparing an Environmental Baseline Document

The following "helpful hints" are intended to improve preparation of sections on the "affected environment" for both EAs and EISs. While they may seem obvious to sophisticated NEPA practitioners, at least the following "steps" should be undertaken in preparing a useful and credible EBD:

- 1. Utilize existing environmental baseline data from non-NEPA documents where available.** Baseline data that support NEPA documents include such sources as environmental monitoring reports, cultural resources surveys, and investigations on the occurrence and distribution of biological resources. Other possible sources include: regulatory compliance documents, permit applications, safety analyses reports, regional or site planning documents, and documents prepared to comply with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Resource Conservation and Recovery Act (RCRA).
- 2. Identify the environmental baseline parameters that are pertinent to the site or facility for which baseline information is being compiled.** Parameters such as air quality, water quality, and land use will almost always be included. Other parameters will be unique to the facility, e.g., proximity to a national park or recreation area or a particular ethnography. Some parameters will be driven by issues such as important cultural (archaeological and historic) resources, seismic risks, or environmental justice.
- 3. Conduct exhaustive searches of existing information for each parameter to be covered.** This is not terribly exciting and involves a lot of "grunt" research

effort. Identifying and reviewing the existing data base saves time and money otherwise needed for original research or field studies.

4. **Review previous NEPA documents.** Previous NEPA documents should be reviewed as part of the existing data base. For example, the "Final Environmental Impact Statement and Environmental Impact Report for Continued Operation of Lawrence Livermore Laboratory and Sandia National Laboratories, Livermore" (DOE 1992) provides extensive environmental baseline data for NEPA documents prepared by Sandia National Laboratories/California. Also, the EA for DOE's Kauai Test Facility (DOE 1992) operated by Sandia contains detailed information on that facility. However, previous NEPA documents should not be relied upon as the *only* source. Also, using environmental baseline information from NEPA documents that are badly outdated should be avoided.
5. **Check all references listed in documents being relied upon for accuracy.** Some referenced sources may not exist or may be erroneously referenced. Others may not even remotely relate to the topics for which they are listed. While checking references is very tedious, it almost always pays dividends in terms of pertinence and reliability.
6. **Identify and fill data gaps and undertake the appropriate investigations to fill them.** Common data gaps include ambient noise levels, cultural resources, threatened/endangered species, and visual resources. Time-consuming field studies may need to be undertaken before the EBD can be completed.
7. **Prepare readable sections for each environmental parameter, making liberal use of references.** Conduct a peer review of each parameter section, making use of "outside" scientific or technical specialists where possible. Section authors should not be allowed exclusive ownership.
8. **Update the EBD at least every three to five years, depending on the frequency of changed circumstances or the need for additional information.** The next revision of the SNL/NM EBD will include a biological species inventory checklist and more information on transportation. Providing electronic access to the EBD is also being considered.

3.0 THE NEPA COMPLIANCE GUIDE AS A TOOL FOR EFFECTIVE NEPA COMPLIANCE

The DOE Office of NEPA Project Assistance (now the Office of NEPA Policy and Assistance) issued a two-volume "Draft NEPA Compliance Guide" for all DOE facilities in October 1988 (DOE 1988). This draft was never issued in final form. Drawing on the 1988 DOE document, SNL circulated its own draft NEPA Compliance Guide in December 1989. The Guide is designed to apply to the SNL activities in New Mexico, California, Nevada, and Hawaii. Because of some major changes, notably the new DOE NEPA implementing procedures effective May 26, 1992 (10 CFR Part 1021), the draft Guide was revised in March 1993. Responding to even more alterations in DOE NEPA policy and procedure, the

Guide was revised a second time and published in 1995 (Hansen 1995). The published version of the Guide occupies a single volume and five attachments. The internal version is assembled in two loose-leaf binders: Volume I, with the same basic text as the published version, and Volume II with 25 appendices.

3.1 Purpose and Scope

The purpose of the Guide is to provide a blueprint or road map for managers and authors preparing documents that conform to the letter and spirit of NEPA. A correlative purpose is to provide information, analyses, and perspectives that are generally not available in other NEPA guidance. Optimally, the Guide serves as the primary management tool for conducting and controlling the NEPA process for a particular agency or facility. At the minimum, it provides a convenient checklist for preparation of various types of NEPA documents.

The SNL Guide includes the following:

- A summary of NEPA, the Council on Environmental Quality (CEQ) regulations, and DOE regulations, policy, and guidance.
- A summary of other federal laws which must be integrated with NEPA requirements.
- A step-by-step procedure for making a determination that a proposed action requires neither an EA nor an EIS (categorical exclusion).
- Detailed step-by-step guidance for preparing an Environmental Checklist/Action Description Memorandum (ECL/ADM). [This is an SNL-prepared document which forms the basis for recommending to DOE the appropriate level of NEPA documentation or whether or not an action might be excluded from the need to prepare an EA or an EIS.]
- Detailed step-by-step guidance for preparing an EA, a FONSI, and an EIS.

The Guide also has a section on "Dealing With NEPA Documentation Problems" which provides suggestions for avoiding pitfalls in document writing and preparation. "How to" sections address major EA and EIS preparation topics: purpose and need for action; proposed action and alternatives; affected environment; environmental consequences (impact analysis); cumulative impacts; "tiering" and "bounding"; incomplete or unavailable information; and mitigation measures.

A unique feature of the SNL Guide is that it provides analyses of complex NEPA compliance "issues" of particular importance to Sandia and/or the DOE. Examples of these special issues are: NEPA/CERCLA/RCRA document integration; environmental justice; pollution prevention; biodiversity; and extraterritorial applications of NEPA.

There is one thing the Guide is not. It is not a substitute for the *complete* CEQ and DOE NEPA regulations and DOE orders, policy statements, and other NEPA guidance.

3.2 Using the NEPA Compliance Guide to Save Time and Cost

Making NEPA work better and cost less has become an understandable "litmus test" for any tool designed to improve the process. The NEPA Guide can avoid some time honored non-compliance problems while providing positive results in cost-effectiveness.

3.2.1 "Models" Don't Usually Work

There is an overwhelming tendency among those with EA or EIS preparation responsibilities to search diligently for some *other* NEPA document that will serve as a "model" for the one under preparation. Thus, the model becomes the controlling guidance for document preparation. The CEQ regulations and the agency's own regulations and policy play a subsidiary role, if they are considered at all. Frequently, reliance on the model is dictated by someone in the agency hierarchy who is unfamiliar with preparing NEPA documents. Sometimes, selection of the model is an arbitrary and capricious decision based on the opinion of one of the speakers at the last NEPA symposium! Or, model selection may be based on a bias in favor of a particular NEPA contractor or point of view. While NEPA documents prepared previously can contribute to creative ideas, too much reliance on models is risky. Using a model is often a way of evading responsibility while suppressing original thinking. Over reliance on a model may only guarantee that, after a great expenditure of resources, the agency will have to start all over again.

Unfortunately, there is no one or even several "models" that will assure preparation of a credible and legally defensible document. Each EA or EIS situation is uniquely dependent on a plethora of variables. Ultimately, following the recommendations of a comprehensive, well researched, and accurate NEPA guide will prove infinitely more reliable than the model espoused by someone who is probably no longer with the agency.

3.2.2 One-Stop Shopping

Like the environmental baseline document, the NEPA Guide serves as a "one-stop shopping" source of information for the harried project manager or document author. By providing all or most of the most pertinent NEPA compliance information in one place, it saves countless hours devoted to reading regulations, telephoning "NEPA types," and frantically searching for a "model." The properly prepared Guide also provides *interpretation* of compliance requirements that can avoid major delays in the future. Having the Guide available as a tool can contribute significantly to saving time and cost.

3.3 Using the NEPA Compliance Guide To Make the NEPA Process More Useful to Decision Makers and the Public

Although the Guide is a published document, the primary audience is neither the public nor top-level DOE "decision makers" (a term with many ambiguities). The "audience" for a NEPA compliance guide consists principally of project managers with NEPA responsibilities, document authors, and NEPA professionals.

The Guide undoubtedly improves the NEPA "process" and makes it more useful by:

1. Describing the NEPA process, and related documentation preparation, to decision makers who are unfamiliar with the NEPA process and whose perception of NEPA is that it is a delaying mechanism.
2. Providing well-documented *authority* for pending decisions either about the NEPA process (e.g., notice of intent, scoping, issuing a FONSI) or implementing the proposed project or program.
3. Providing a legal and procedural *rationale* for document writing, contents, format, and discussion of issues.
4. Establishing a legally sufficient process that stands a much greater chance of being defensible than *ad hoc* decision making.
5. Enhancing the likelihood of producing a document that is understandable and credible to the public reviewer.

At Sandia, the NEPA Compliance Guide is used routinely by those with NEPA compliance and documentation responsibilities. It is also used as a teaching resource for internal training conducted by NEPA specialists.

3.4 Steps in Preparing A NEPA Compliance Guide

The steps involved in preparing a useable NEPA Compliance Guide include, but are not necessarily limited to, the following:

1. **Collect and review all existing and proposed agency NEPA implementation regulations, manuals, guidance documents, and policy memoranda.** These include such sources as the CEQ regulations in 40 CFR Parts 1500-1508, the "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" (46 FR 18026, March 23, 1981), the agency's own (existing and proposed) NEPA implementation regulations, former or current guidance documents, and agency NEPA policy statements. Internal agency- or facility-specific procedures, whether or not contained in regulations and guidance manuals, should also be researched and described.
2. **Create a detailed annotated outline of the Guide's organization and contents.** This is much more than a mere table of contents. Annotations should specify in detail what each Guide section will contain and how it will be written. Data gaps should also be identified.
3. **Select an author (or authors) who are highly experienced in NEPA implementation.** Such authors may be internal to the agency, a contractor, or both. Be wary of involving *too many* authors; using only one or two authors is best. (This is in contrast to the EBD which necessitates authors from a wide range of disciplines.)
4. **Take the time to conduct thorough peer review of the draft Guide.** Avoid setting arbitrary deadlines and rushing the process. It is highly likely that the Guide will require several iterations before it can be widely distributed. If at all possible, have the draft Guide reviewed at the agency headquarters level. It is also important that the draft Guide be reviewed by one or more attorneys who are NEPA specialists. (In the case of the SNL/NM Guide, an attorney/NEPA specialist was the author.)
5. **Use the Guide at a NEPA compliance training workshop to "work out the kinks."** Using the Guide as the primary teaching aid at one or several NEPA compliance training workshops can identify strengths and weaknesses. This technique was employed at SNL/NM. The biggest problem with this strategy, as might be expected, is persuading participants to review the Guide thoroughly *before* attending the workshop.

4.0 Conclusion

Environmental baseline documents and NEPA compliance guides should be carried in every NEPA implementation "tool kit." These two indispensable tools can play a major role in avoiding repeated violations of NEPA requirements that have occurred over the past 26 years. Both the EBD and the Guide can make major contributions toward preparing NEPA documents that save time and costs while being legally defensible and more useful to decision makers and the public.

REFERENCES

Hansen, Roger P.: "National Environmental Policy Act (NEPA) Compliance Guide Sandia National Laboratories," SAND95-1648, August 1995.

IT Corporation and Consensus Planning, Inc./Zephyr Design: "Sandia National Laboratories, New Mexico Environmental Baseline Update," SAND92-7339, January 1993.

U.S. Department of Energy (DOE): "Draft Programmatic Environmental Impact Statement for Stockpile Stewardship and Management," DOE/EIS-0236, February 1996.

U.S. Department of Energy (DOE): "Secretarial Policy on the National Environmental Policy Act," June 1994.

U.S. Department of Energy (DOE): "Final Environmental Impact Statement and Environmental Impact Report for Continued Operation of Lawrence Livermore National Laboratory and Sandia National Laboratories, Livermore," DOE/EIS-0157 and/or SCH 90030847), Volumes I and II August 1992.

U.S. Department of Energy (DOE): "Kauai Test Facility (KTF) Environmental Assessment," DOE/EA-0492, DOE AL. Albuquerque, NM. July 1992.

U.S. Department of Energy (DOE): "Draft NEPA Compliance Guide," Office of NEPA Project Assistance, Vols. I and II, October 1988.

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.