

CONF-850314--53

DE85 010493

ENVIRONMENTAL ASSESSMENT PROCESS NEEDS
AND FUTURE DIRECTIONS

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Presented at

Waste Management '85 Symposium
Workshop on Environmental Assessments and EIS
March 25, 1985

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Abstract

The environmental assessment process as legislatively mandated by the National Environmental Policy Act of 1969 (NEPA) constitutes a double-edged sword as regards the successful management and disposal of radioactive waste. On the one hand, NEPA requires identification and disclosure of the environmental and societal consequences of a given major federal action, consideration of alternatives and/or mitigative measures leading to the same end result, a balancing of costs and benefits, and provides for and encourages public participation in the decision-making process regarding the proposed action(s). On the other hand, public participation supported by judicial decisions, based more upon procedural than substantive issues, may delay, alter, or indeed prohibit a proposed course of action. If the cognizant federal agencies (DOE and NRC in the radioactive waste area) comply with both the spirit and the letter of NEPA a framework for the successful management of radioactive wastes of all types can be developed. If, however, these agencies are less than earnest in their NEPA compliance actions or if public opposition is backed by over zealous court action, any radioactive waste management/disposal action (however technically sound) can be hoisted upon a petard from which it may not be freed until well into the next century.

With a few notable exceptions, detailed environmental assessments stem from the requirements of the National Environmental Policy Act of 1969 (NEPA) which was ratified by the Congress at the height of national concern with environmental protection and the preservation of environmental quality. NEPA applies to all major actions to be undertaken by federal agencies. It is essentially a planning process which aids in making a reasonable decision and is the nearest thing we have as a nation to long-range planning. The Act requires the disclosure of probable environmental impacts (over time this has broadened to include socio-economic impacts), mitigative measures which would reduce the probable impacts identified in the initial analysis, identification of viable alternatives to the proposed action along with the impacts of each alternative, and finally a balancing of the costs (both environmental and economic) and the benefits of the proposed action and those of the alternatives.

A major feature of NEPA is that it permits public involvement in the decision-making process. When a proposed or pending action involves substantive environmental issues a full-blown environmental impact statement (EIS) is required. The preparation of the EIS is a two-step process and is one for which the agency taking or approving the proposed action is responsible. The first step is the preparation and issuance of a draft EIS (DEIS) which is made available for comment. In the early days of NEPA compliance this was the first time during which public involvement was possible. Now the public can be involved in developing the scope and content of a DEIS. The cognizant agency must respond to all comments and may conclude that basic changes in the DEIS should be made based on substantive issues or information provided in the comment period. A final EIS (FEIS) is then issued and serves as the basis for making a decision regarding taking the proposed action or one of the alternatives. A public hearing may be

held after the FEIS is issued and before a final decision is reached. The hearing format varies from one agency to another. NRC hearings are adjudicatory in nature, whereas DOE holds administrative hearings. Decisions of the hearing boards are subject to appeal before an appeals board, and the final agency decision may be reviewed by a court having jurisdiction.

Proper compliance with NEPA came to rapid maturity in the commercial power reactor licensing process conducted by the Atomic Energy Commission (AEC). The judicial decision in 1971 regarding the EIS for the Calvert Cliffs nuclear power station in essence stated that the AEC had not done an independent and substantive analysis (as required by NEPA) of the possible environmental consequences of the operation of the Calvert Cliffs plant. The response of AEC was to engage the assistance of various of its national laboratories in the preparation of EIS's for nuclear power plants. One must recognize that when the Calvert Cliffs decision on the adequacy of the EIS occurred in 1971 more than 60 applications for construction permits or operating licenses for nuclear power plants were being processed by the AEC. To unduly delay these applications because of legally determined inadequate compliance with NEPA could have very serious economic as well as regulatory consequences. In retrospect, the AEC/National Laboratory response may have been a NEPA compliance overkill. In any event, it led to legally adequate EIS's and the construction permit/operating license process moved forward. By this AEC action, the standard and the tone for all nuclear related NEPA actions was indelibly imprinted in the regulatory process.

Parenthetically, the Congressional authors of the National Environmental Policy Act envisioned EIS's of a few pages in length. Post Calvert Cliffs, the EIS's for nuclear power plants ran from 50 to 100 pages, and as the paranoia of adverse legal review persisted the size of EIS's grew. The

Council on Environmental Quality (CEQ) wisely put limits on EIS size; which limits have been readily exceeded by the clever use of appendices of open-ended length. Jokes about the number of trees cut to provide paper for EIS's should be joined by estimates of the risk of hernia to those lugging away EIS documents to comment upon.

A very positive aspect of the environmental assessment process has been the growing recognition and acceptance, first by AEC followed by NRC and to a lesser extent DOE, that early and honest encouragement of public participation in the planning and scoping stages of EIS development is on balance a benefit and not a hinderance to forward motion. There is a natural bureaucratic tendency to make policy and administrative decisions in private and then reveal them as essentially a fait accompli. This is particularly true in regard to nuclear issues where often perception and emotion are key elements rather than facts and substance. Early public involvement can lead to a prolonged decision-making process because as the public gains knowledge and insight the more opportunity exists for objection, challenge, and judicial recourse. Understandably, agencies fear the results of judicial actions, because the majority of such actions rule against the agency involved. To deny public involvement leads only more rapidly to the same endpoint. A more or less damned if you do, damned if you don't situation. However, from an ethical, democratic standpoint open, early public involvement is clearly the proper approach.

Current and future environmental assessment activities regarding radioactive waste will be in two areas; first, the cleanup of formerly utilized sites, including uranium mines and mills; second, the siting and licensing of new nuclear waste disposal facilities for low-level radioactive waste, high-level radioactive waste, and spent nuclear fuel.

Because actions in all of these areas are in the formative stage, the NEPA compliance approach suffers from a rather ad hoc, exploratory approach, not lending itself to early public involvement. When an agency doesn't have a clearly defined approach to problem resolution, said agency hardly wants to share this indecision with the public, part of which public will use indecision as a means to thwart any and all actions. There is, however, a growing experience base upon which to gain confidence and provide guidance and uniformity for the NEPA process. The cleanup, decommissioning actions now underway at West Valley, New York, are a case in point. There is also much to be learned and incorporated in present/future NEPA actions from past experience. Principal among these lessons learned is the need for more openness; more public involvement at the very beginning of cleanup or waste disposal programs. Such openness can establish credibility and goodwill which are absolutely necessary for the successful implementation of cleanup and waste disposal actions.

Next to the bubonic plague, disposal of waste of any kind is the least popular activity in America. For public health and safety reasons alone it is necessary to manage and to dispose of radioactive wastes in a safe and secure manner; safe and secure commensurate with the hazards and risks involved. Disposal must be done in a technically sound way, a publicly acceptable way,

and a procedurally and legally sound manner. Unnecessary, unwarranted, and interminable delays in the siting, disposal process must be severely constrained or eliminated altogether. Not all delays are due to intervention and legalistic maneuvers; some are due to plain indecision and unwillingness for political reasons to bite-the-bullet. Be that as it may, the 1986 deadline for each state to meet its obligation for proper low-level waste disposal will not be met, and 1992-1993 is the current estimate for when new LLW sites will be operational. In the high-level waste area there is a growing feeling that the 1998 date for a permanent repository to be operational will not be met, and the Monitored Retrievable Storage (MRS) concept will be needed to fill the time gap.

One mechanism for expediting the process without taking any shortcuts or ignoring relevant issues is to prepare programmatic or generic environmental impact statements dealing with key issues, prepare detailed well-documented reports and handbooks covering these issues, which reports and handbooks support the EIS's. The EIS's could serve as the basis for rule making which process when complete in essence says this is the way things are going to be done, the matter is settled and will not be the subject of further debate or legal action! This course of action has proved effective in other segments of the nuclear fuel cycle. Site specific, process specific environmental assessments may then tier from the programmatic and generic EIS's and the results of the rule-making process, thereby identifying the issues which are open for debate and negotiation. In fact, the NEPA process may be used as the catalyst for moving the entire radioactive waste program forward to a positive end-point.

Effective generic methods for complying with relevant regulations and standards such as the Clean Water Act, RCRA, and TOSCA must also be developed. Likewise, sound and achievable clean-up criteria for contaminated sites and facilities (based upon the concept of "below regulatory concern") and performance criteria for disposal facilities must be established and agreed to by the cognizant federal and state agencies.

Clearly the most important factor in this entire process and the most difficult to deal with is the need to arrive at some degree of national or, perhaps more importantly, regional consensus regarding radioactive waste disposal. Consensus is not impossible to achieve but does require time, patience, openness, and a pervasive attitude of good will. The process to derive a true consensus is not one that can be directed or controlled -- except perhaps very subtly. As stated earlier lack of control is a bureaucrat's nightmare, the more so because of the uncertainties and indecision surrounding the waste issue itself due to emotion and political pressures. Without consensus arrived at openly in the public arena, no constituency of a broad based nature will develop. Without a broad constituency many radioactive half-lives may elapse before permanent disposal or permanent cleanup becomes a reality. One way to develop a consensus would be to form policy, review and advisory commissions at the state level, which commissions would interact with DOE and NRC and among themselves. Such state commissions could be given legitimacy by being appointed by the Governor and approved by the Legislature. Commission support

could derive from a combination of DOE and state funds. In New Mexico, the Environmental Evaluation Group formed basically along the lines described above has been an effective instrument in DOE-state interactions for the past 6-1/2 years.

The present challenge is that of demonstrating that a democratic, high-technology society can

resolve controversial issues in an orderly way. Unless this can be done for radioactive waste there is no hope of dealing effectively with the hazardous chemical waste problem, the magnitude and ubiquitous nature of which make the radioactive waste question miniscule.