

INSTITUTIONAL FACTORS AFFECTING DOE WASTE MANAGEMENT AND ENVIRONMENTAL RESTORATION PLANNING

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ABSTRACT

The magnitude and impact of the U.S. Department of Energy's (DOE) waste management and environmental restoration program requires a drastic change in DOE's culture to include the participation of all levels of government, public forum representatives, and the public. Early in the process of developing a new, comprehensive five-year plan for environmental restoration and waste management, Secretary Watkins invited affected States, Indian Nations, and organizations of elected officials to form the State and Tribal Government Working Group to comment on two formulative drafts of the plan. Management Systems Laboratories of Virginia Tech was asked to help plan and facilitate two review sessions in the spring and summer of 1989, based on a perception of impartiality, experience with similar groups, and active affiliations with State governments. A third session in the fall was devoted to reviewing the draft applied R&D plan and guiding the scope of a national prioritization methodology. This paper emphasizes three major institutional factors affecting DOE's future: the need for ongoing, pervasive culture change; the need to display this change through truly cooperative planning; and the need to involve the regulatory community in the process of technology development so innovative solutions can be applied with the least possible delay.

CULTURE CHANGE

In its first Five-Year Plan, DOE pledged to evolve from a production-oriented culture to a culture characterized by open communications, clearly understood and demonstrated priorities for environmental stewardship, and accountable management. To begin operationalizing this pledge, DOE invited the participation of affected States, Indian Tribes, and representative organizations of elected officials to review and comment on two formulative drafts of the Five-Year Plan. Representatives from Colorado, Idaho, Kentucky, Nevada, New Mexico, Ohio, South Carolina, Tennessee, and Washington, were invited to join representatives from the Shoshone-Bannock and Yakima Indian Nations and the National Governors Association, National Conference of State Legislatures, and the National Association of Attorneys General in Blacksburg, Virginia and later in Chicago. A subsequent session was held in Denver to review and comment on DOE's plans for applied research and the development of a national prioritization system.

Commitments at those meetings reflected both the viewpoints of outside participants and signs of DOE's willingness to demonstrate a change in its culture. Although commendable and encouraging, this beginning leaves much to be done. The future requires increased commitment to an open culture with leadership, patience, and courage in the face of competing internal and external interests. This

is where the challenge lies. We believe the challenges DOE faces can be summarized broadly in two areas.

Internal Discipline

Though announced last year by formal and informal Secretarial pronouncements, DOE's cultural change must take place against the inertia of traditional mindsets and corresponding funding patterns. DOE's culture, its set of shared values, determines both how DOE (Federal employees and contractors) behaves internally and also how DOE interacts with other government agencies, interest groups, and the public. DOE must exhibit the internal discipline necessary to alter traditional ways of managing. We identify several specific practices that support internal culture changes.

First, DOE's budget process needs to change. Departmental budget requests for environmental compliance and cleanup, including research and development toward such ends, have until lately been defensible only in direct relation to the agency's production mission: nuclear materials and weapons for national security. When something had to give, it was environmental restoration and waste management. DOE must demonstrate that era is past. Current changes in budgeted amounts for environmental restoration and waste management versus production are encouraging signs.

Second, DOE must send a clear message down its chain of command that responsibility and accountability will be strictly monitored, enforced, and rewarded. For example, new and renegotiated Management and Operating (M&O) contracts are planned to hold contractors liable for compliance violations if the Department funds activities needed to achieve compliance. This system will include expanded in-

centives for contractors to achieve excellence and cost effectiveness in their performance, enhanced understanding of performance expectations and performance criteria by both Federal and contractor employees, and tighter controls to ensure corrective action will be forthcoming when contractors do not perform to standards.

Third, DOE must strengthen the independent internal oversight function of the Assistant Secretary for Environmental, Safety, and Health; as well as that of independent external oversight, including the Advisory Committee on Nuclear Facility Safety and the Defense Nuclear Facilities Safety Board. Fourth, the recent decision that DOE, in accordance with the National Environmental Policy Act (NEPA), will prepare two major programmatic environmental impact statements (EIS's) shows DOE's commitment to making sharp changes from traditional management practices.

External Openness

Although DOE's cultural change must grow from within, a sign of that growth is the increased willingness to listen to the outside. DOE has added six States (California, Florida, Illinois, Missouri, New York, and Texas) and the Umatilla Indian Nation (Washington State) to the State and Tribal Government Working Group (STGWG). DOE must continue to involve this group, as well as environmental special interest groups. Early in April, DOE will hold a Stakeholders' Forum, including representatives from industry, labor unions, and environmental interest groups. The involvement of these groups is necessary but not sufficient. The participation of the general public is a challenge that DOE recognizes but hasn't yet achieved.

Other welcomed cultural openness measures include: a special hotline within DOE headquarters to allow employees and other citizens to report specific facility concerns, and an appointed Secretarial Panel for the Evaluation of Epidemiologic Research Activities (SPEERA).

While DOE must remain receptive to STGWG and to other interested parties and individuals, it brings up a potentially serious problem. Being open and receptive to outside scrutiny does not mean DOE must agree with or commit to do (unless it is the law or part of a signed agreement) everything suggested. What must be achieved is some consensus among groups that have traditionally "earned their living" by disagreeing. In such an arena, players may focus on the adversarial game itself and not the ultimate goal--cleanup and compliance. This problem arises in the context of cultural change. It's not only DOE's culture, but that of other interested parties, that must change. The danger is a cultural backlash brought on by subtle or overt--or even accidental--pressure on DOE while it's trying to straighten itself out. DOE seems to be genuinely trying to make a 180-degree cultural shift. As DOE demon-

strates its willingness to listen to its critics and its ability to meet commitments, trust will begin to increase among all parties, and the appropriateness of adversarial postures will decrease. Just as the Department's failures must be exposed, its successes and improvements *must be praised*. Bob Neill said at a Washington International Energy Group conference last October 31 that DOE should "Publish bad news." He was right. And DOE has been doing the right thing, attempting to become its own severest critic. But fair is fair: if DOE publishes its own bad news, then DOE's critics need to publish its good news. Cultural revolutions, it is clear, come on a tide not of falling but of rising expectations.

COOPERATIVE PLANNING

The experience of hosting the first two meetings of the State and Tribal Government Working Group meetings, and observing the third meeting, has given us the opportunity to reflect on lessons learned for involving outside affected parties. These lessons are discussed below.

Session Design

Planning a successful meeting requires similar thinking to planning the effective design of a document. We suggest consideration of the following formula:

$$\text{audience} + \text{purpose} = \text{design}$$

In our case, we could reasonably anticipate certain audience expectations. For example:

1. STGWG members were expected to be generally knowledgeable about DOE environmental restoration and waste management. Some key issues were evident based on a letter from the governors of ten states sent to the Secretary of Energy before the first meeting. The letter called for a comprehensive program to clean up DOE's defense and research facilities. DOE's invitation to review the Five-Year Plan acknowledged the governors' concern and served to prepare DOE for dialogue and making possible commitments.
2. Participants could be expected to agree on some issues and disagree on others because of competing interests.
3. Participants would be skeptical about DOE's motives and abilities to change.
4. Some disagreements between DOE and the participants over the issues, and their resolution, was inevitable.

The purpose of each session should be clearly established to prevent false expectations. In the case of the STGWG, the purpose was to review and comment on the issues and programs defined in the Five-Year Plan. Meeting design must be structured around audience expectations and meeting purpose. For involving diverse, knowledgeable,

and skeptical participants the following meeting characteristics are suggested.

- Avoid lengthy, technical presentations. These presentations decrease interest, increase suspicion and perceptions of an unwillingness to listen, and constitute a reversion to the old culture.
- Allow sufficient time for an executive session by the participants. This session will permit them to collect and discuss group and individual comments, which in turn will minimize differences of opinion among individuals and maximize meaningful discussion.
- Don't overplan. A successful meeting plan will bend to the evolving needs of the participants.
- Include time for participants to get to know each other. If commitments are met and working relationships are established, trust will be confirmed by actions.

Include Outside Participants Early

Two points are worth making here. First, include outside participation in the formative stages of developing ideas. Realistically, participation at the beginning is the best time to influence the direction an idea will take. Outside participants know that and will be suspect of de facto conditions. We acknowledge that some issues are sensitive and the risk of disclosure to unfriendly observers is possible. But when appropriate, including all participants in formulating ideas will increase trust and ownership of the final product by all stakeholders.

Second, provide review and orientation materials in advance of the meeting date. In very few instances are meetings enhanced by withholding information disclosure until the meeting. Advanced distribution of information encourages thoughtful review and comment.

Commitments

Meeting participants should be of a level that encourages meaningful dialogue and commitment. For State and Tribal representatives, one of the positive attributes of all three STGWG meetings was the ability of DOE persons to make decisions and commitments on behalf of the Department. This does not mean that all requests were met. It does mean that comments were discussed openly and one of three actions were taken: (1) a commitment to change was made, (2) a commitment to change couldn't be reached without further research and discussion, or (3) an impasse had been reached and no agreement could be reached. In

no case should issues be left without resolution through one of these actions.

Flexible Facilitating

Some group meetings require strong, active facilitating while others are better served by passive facilitating. In either case the ability to recognize and adapt to the requirement is critical. For the states and tribes meetings, a strong facilitator wasn't required because they were practically self-led. However, even a self-led meeting can benefit from a good facilitator. Effective facilitation can (1) better organize and direct group discussion and (2) improve the collection of valid comments.

Meeting Details

Attention to simple details make the difference between an unsuccessful meeting and a successful one. For example,

- Minimize administrative and logistical chores for the participants. Meeting participants who are informed about arrangements, understand the agenda, and feel cared for are better able to focus on the meeting purpose.
- Provide information about the meeting well in advance. This contributes to the participants feeling the meeting is well organized and worth attending.
- Consider protocol. Ensure that meeting room details enhance participation by ensuring proper and equal arrangements.
- Include a social "ice-breaking" event. This is particularly effective for first-time participants.
- Small details like name tags and name tents, participant lists, word processing and administrative services, all contribute to meeting success.

REGULATORY PROCESSES

RCRA/CERCLA/SARA Impacts on DOE's Technology Development Process

DOE's Environmental Restoration and Waste Management Five-Year Plan (August 1989) included a brief section on Applied Research and Development. Between June and November 1989, DOE produced a substantially expanded draft Research, Development, Demonstration, Testing, and Evaluation (RDDT&E) Plan to identify the Department's environmental problems and the implied needs for new technologies (and new management structures) to solve these problems. The RDDT&E Task Force characterized the essential problem as entropy: the dispersion of low-volume, high-value radioactive and hazardous chemical waste streams into high volumes of low-value concentrations. The plume boundaries of these dilute streams are extremely

difficult to find; once found, difficult to access for treatment; and often impossible, once accessed, to clean to regulatory standards. Leo Duffy, Director of DOE's newly-created Office of Environmental Restoration and Waste Management, has called for an end to DOE's "technology stagnation," an end to the era of "muck, suck, and truck" or "pump and treat."

Entropy was also the management problem: the dispersion of expertise throughout the operations offices and national laboratories; the not-invented-here syndrome and consequent disinclination to cooperate with other federal agencies, industry, and academia; and the lack of a headquarters focal point for applied RDDT&E.

As DOE produces the first update of the Five-Year Plan, which will incorporate a final, edited version of the draft RDDT&E plan, the new Office of Technology Development (OTD) is acutely aware of the need to align itself and its field elements with the new culture, recognizing that unless DOE can address regulatory concerns in parallel with technical concerns, its proposed solutions may instead become problems.

Technologies for treating, storing, or disposing of RCRA wastes must receive State permits, and it is not uncommon for the permitting process to last eighteen months. Although no permits are required for technologies applied to CERCLA cleanups, such cleanups often yield RCRA wastes. And the waiver of sovereign immunity under SARA makes states active parties in Records of Decision, so that approving the use of new technologies becomes part of approving a remedial action plan.

Benefits of Applying the Quality Circle Concept

The need for a new, more intimate relationship between OTD and DOE's stakeholders, including institutional stakeholders, is created by the regulatory drivers of environmental restoration and waste operations (including agree-upon schedules), discovery of new problems, and technological development outside DOE. DOE has adopted federal facilities agreements, tri-party agreements, etc., as "contracts" for cleanups and compliance. Such agreements define what DOE will accomplish and the

schedule for accomplishment. Absent negotiated schedules, meeting these compliance agreements will drive DOE toward using current technologies unless OTD establishes confidence that innovative approaches can be delivered without delaying the project. Creating quality circles to conduct cleanups and compliance projects can provide the needed confidence.

Quality circles are teams of experts working together to assure satisfactory project completion. For an environmental restoration project, the quality circle would include, at a minimum, the DOE program manager with responsibility for the site being remediated, the OTD manager responsible for the relevant technology area, the DOE M&O contractor manager responsible for the site, and representatives of all regulators having jurisdiction at the site. It is the role of the quality circle to help in selecting the technology to be used, to identify where RDDT&E can help meet project goals, to monitor progress of the RDDT&E being conducted to support the project, and to propose changes in the scope of the project or of the RDDT&E as new information of any sort comes to bear.

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