

"CULTURE CHANGE" AT THE OPERATIONAL LEVEL: SOME OBSERVATIONS ABOUT OAK RIDGE

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ABSTRACT

There is ample evidence that reforms in DOE's waste management and environmental protection programs are resulting in real "culture change." These changes are taking place throughout the DOE/Contractor organizational structure--from Washington headquarters to the contractor workplace. The reform effort is multi-faceted, and the energy to effect change continues to flow from the Office of the Secretary of Energy. Synergistic forces for positive culture change have been put in place. Absent an overt and concerted change in policy at the top of DOE management, we can expect to see these forces shape a new DOE culture which exhibits technical excellence and sensitivity to public concerns.

There is a need to institutionalize reform programs. Congress should recognize the progress that is being made and act to assure that reforms will endure changes of executive administration.

AN OVERVIEW

Culture change is underway in the nuclear research and production facilities of Oak Ridge. But, at this point no new logos or divisional banners have been designed to symbolize the new esprit de corps. The changes are subtle and subdued, but very real. The forces are in place to create continuing change and the process is inexorable.

The new logos and banners will come later, when nostalgic tales of the good ole days, "when we ran our own shop," will fall on the deaf ears of busy managers and workers who are anxious to show the public what a good job is being done.

Admiral James D. Watkins, U.S. Secretary of Energy, must be given a great deal of credit for the forces of change which are now creating this transformation. The Admiral has written that President Bush warned him before taking the job at Energy, that there were very serious problems at DOE. The nature of these problems was made clearer by a letter signed by six state governors which lay on the Admiral's desk when he arrived at his new job. That letter explained the need for a national commitment to an environmental cleanup of the DOE facilities across the country. Three months later, 9 state governors signed a detailed environmental policy statement and program of national cleanup objectives which was forwarded to the Admiral. These sincere expressions from the Governors no doubt helped to shape the Admiral's thinking on the need for "culture change." The events later that year at Rocky Flats most surely impacted the plan that was taking shape.

Admiral Watkins' June 27, 1989, announcement of a "Ten-Point Plan for Environmental Protection and Waste Management" was warmly welcomed in several state capitols. At that time we all had our personal reservations about the effectiveness of that plan. We wondered how the managers and workers of the sprawling DOE complex would respond or react.

Now--with over 18 months of experience with Tiger Team audits, state oversight agreement negotiations, new compensation incentives for contractors and 5-year plans--the outlook is clearer. Real change is taking place at the

operational level. Admiral Watkins' initiative for "culture change" has moved beyond the Washington Beltway to the working world.

THE TENNESSEE EXPERIENCE: A REVIEW OF THE PERIOD 1983-1989

In 1983 Tennessee made a precedent-setting move to exert regulatory authority at federal facilities in Oak Ridge. It was painfully apparent that Tennessee's vital interests in environmental protection could no longer be left solely in the care of the federal agencies involved.

Media stories of offsite mercury releases, "witches caldron" waste lagoons, and radioactive contamination brought the confrontation between state and federal forces to a boiling point that year.

Out of the conflict came a constructive solution, a precedent-setting Memorandum of Understanding (MOU) with DOE and the Environmental Protection Agency signed in 1983. This MOU established a new framework for interagency coordination, planning and joint problem solving. A new dynamic was created, and there was a leap forward in efforts to reform waste management at Oak Ridge. Beginning in that year and continuing on to today, state environmental regulators have helped to drive reforms in waste management and environmental restoration. Our regulators partnership with DOE in project definition, priority setting, and budget preparation.

During this period (1983-1989) a new Oak Ridge operating contractor was selected by DOE and a new DOE manager of Oak Ridge Operations took the helm. Joe La Grone and Martin-Marietta Energy Systems both sought to establish better cooperative relationships with the State of Tennessee.

Over these years, impressive progress was made in wastewater treatment and development of waste incineration capability. Waste stabilization and radiological waste storage demonstrations were started. The exhaustive process of waste site identification, remedial investigations and feasibility studies was begun for a large number of contam-

ination areas on and off the Oak Ridge reservation. The plants and labs made considerable progress in waste reduction.

This six-year intensive period of activity to reform Oak Ridge waste management and environmental protection programs created very fertile ground for the new seeds of "culture change" which Admiral Watkins would sow.

THE TENNESSEE EXPERIENCE: 1989 TO PRESENT THE WATKINS YEARS

Admiral Watkins' commitment to reform the health, safety and environmental protection programs of DOE has been multi-faceted and robust. He has set separate programs in motion which will have synergistic effects toward positive culture change at the operational level. It is necessary now to continue a high level of Secretarial and Congressional commitment to the following reforms.

New Contractor Award Fee Incentives

Prominent among the items of the June 27, 1989, 10-Point Initiative was a new criterion for award fees to contractors. For the first time over half of the available award fee would be based on contractor compliance with environmental, safety, and health requirements.

We have learned in the operational setting at Oak Ridge that this contracting reform has particular relevance to our state regulators on site. The normal effect of their enforcement actions is magnified many times over by this change.

Normal state enforcement mechanisms provide extensive checks and balances to protect the rights of the accused. There is usually an extended period of consultation with the accused to try to achieve voluntary compliance. Voluntary compliance can reduce the laborious legal mechanisms to a minimum. But, if a large corporation with deep pocket resources and an aggressive legal staff decides to fight state enforcement, progress toward compliance can be slowed to a snail's pace and payment of penalties can be delayed and delayed.

It has been confirmed in the operational setting at Oak Ridge that initiation of state enforcement proceedings against Martin Marietta or other contractors has the potential to influence the contractor award fee level. Even initiation of early notices of violation are routinely brought to the attention of the Manager of Oak Ridge Operations or DOE plant or laboratory managers who will make those critical contractor award fee evaluations. The award fee sums that hang in the balance are far greater than the potential state civil penalty assessment amounts. The state enforcement leverage for "voluntary compliance" is greatly enhanced. Culture change and compliance become matters of self-preservation for the contractor.

The continued effectiveness of this reform is particularly dependent upon the commitment of DOE managers to use it vigorously for environment, health and safety compliance and culture change. To date, we have had that managerial commitment at Oak Ridge.

Tiger Team Assessments

Two Tiger Team assessments have been completed at Oak Ridge. The Y-12 production plant and the Oak Ridge National Laboratory (ORNL) were evaluated in Tiger Team visits about 16 months apart. The State was given good access to the evaluation teams in each of these instances. Severe limitations of state staffing at Oak Ridge hampered our ability to interface with the teams during their on-site work, but the information flowing from team reports is very helpful.

Our review of the two Oak Ridge Tiger Team reports has led us to the conclusion that these oversight assessments create a very effective momentum toward "culture change." There is ample Tiger Team documentation of the weaknesses inherent in a system of self-evaluation and self-regulation.

One example of this myopia is found in the poor performance of the laboratory-wide self-assessment that was conducted at ORNL prior to the Tiger Team visit. Only 14% of the Tiger Team's environmental findings were fully identified and only 26% were even partially identified in the pre-team self-assessment by ORNL.

The ORNL Tiger Team report should certainly cause a serious re-thinking and restructuring of DOE and Martin Marietta environment, health, and safety management systems. The current collegial management structure was found to be lacking in goals formulation, comprehensive institutional planning, information systems for feedback on performance, attention to implementation detail, and lacking in resources to get the job done.

Both of the Oak Ridge Tiger Team reports make the case for a complete re-evaluation of all environmental media monitoring systems. Such an effort is included in Tennessee's Oversight Agreement which we expect to sign with DOE in the next couple of months. It can be expected, based on Tiger Team findings and our own observations, that significant environmental monitoring improvements will be needed.

We think that the Tiger Team reports we have seen are hard-hitting and thorough. The findings will certainly help guide the state in the expanded oversight role which we envision through our new agreements with DOE.

With the Tiger Team findings laying out on the table for the whole world to see, there seems to be only two alternatives for DOE and the contractors at the operational level:

(1) culture change, or (2) contract for design of underground bunkers.

While we are very enthusiastic about the vigorous Tiger Team efforts, there is one sobering observation which should be made. Hopefully, this observation will be helpful to point the way toward the second wave of culture change.

The yardstick of Tiger Team evaluation in many instances is the body of DOE Orders. This is especially true in areas such as workplace safety and the handling of nuclear materials where DOE retains self-regulatory status. A recent report was prepared for the Defense Nuclear Facilities Safety Board comparing DOE Orders with Nuclear Regulatory Commission Standards. The DOE Orders did not fair well in the comparison.

The conclusion can be drawn that Tiger Team evaluations using NRC standards, or real equivalents to those standards, would be even more critical of current DOE operations.

The Five-Year Plan Process

The DOE involvement of States and other interested parties in the formulation of the national Five-Year Plan has helped to establish new lines of communication, and with that, greater trust and mutual accountability. The State and Tribal Governments Working Group has been successful in articulating consensus positions for changes in the Five-Year Plan. To the credit of DOE, some very savvy managers have listened to those positions and constructive change has taken place. The culture change resulting from this process has been two-way. There is a new realization on the part of the states that dialogue with DOE can be productive. There is a decrease in cynicism.

During the process of production of the national Five-Year Plan the DOE Operations Offices around the country were stressed by new headquarters data requirements. Early on there were no standardized formats for the new data that was required. To complicate matters, the early Five-Year Plan deadlines were extremely tight.

These problems are reviewed here as background to an expression of hope that headquarters data requirements will soon become routine and standardized and that the Operations Offices will then have resources and energy to devote to site-specific Five-Year Plans.

Very soon the culture change emphasis of the Five-Year Plan process must shift to the site-specific plans. We believe that it would be very helpful to have operations office waste management officials conduct separate planning workshops for local government officials and for interest group representatives. These workshops should be made convenient and attractive, even if that means paying travel expenses for interest group representatives. The Tennessee Valley Authority has been very liberal in using travel funds

to attract outside participation in its agency strategic planning. This has helped to bolster the public acceptance of TVA plans and it has improved the quality of their planning processes. DOE should try this too.

Tennessee's Oak Ridge Environmental Oversight and Health Studies Agreements

The 1989 opportunity for the State to negotiate with DOE for a new oversight role at Oak Ridge could not have come at a better time. The State commitment to permitting and regulatory oversight had been most significant in the first few years following the 1983 MOU. Gradually, that commitment had suffered from budget pressures and the need to divert resources to other environmental threats. Tennessee in those years had attempted to convince DOE that federal funding of our Oak Ridge oversight role was justified.

We argued that Tennessee's environmental problems at Oak Ridge had resulted from the pursuit of national missions. It was unfair to ask state taxpayers to fund the oversight role for improving waste management and cleanup of past environmental abuses. Past history did not inspire confidence that effective cleanup would take place without constant state oversight. DOE still refused to fund our oversight efforts.

Admiral Watkins' 1989 reversal of the past policy of DOE with respect to funding state oversight also opened other exciting opportunities. There was the possibility to address the lingering public fears regarding the possible health effects of past chemical and radionuclide releases from the DOE facilities. These fears were stirred again during 1990 when new data was released on the contamination of sediments in Watts Bar Lake.

There was now the opportunity to build state and local government emergency response capabilities. Plans for effective emergency response had been produced but, without a funding source for implementation, these plans had begun to gather dust on the shelf.

Environmental oversight and monitoring, health studies, and emergency response will all be addressed when our agreements are signed and funded. We are excited about the opportunities for progress. Tennessee will soon begin to build the new oversight staff, expected to include 89 full-time positions three years from now. As the staff grows and more intensive interaction and cooperation with DOE and contractors occurs, real culture change is inevitable.

Oversight negotiations took longer than we anticipated. We were disappointed to find that the inclusion of Washington staff along with Oak Ridge Operations staff at the Nashville negotiation table did not prevent later second-guessing in Washington on our points of agreement.

Tennessee was not content to execute an agreement confined to the DOE model outline based on Rocky Flats work. You might say that we tested the "elasticity" of culture change in our negotiation sessions.

The process was accomplished with a minimum of bombast and with only a few subtle threats. There was a very constructive dialogue most of the time, and like the work on the Five-Year Plan, the process opened up new lines of communication for Tennessee.

We found a true indicator of culture change elasticity when we pressed our demands for a state radiological health oversight role. This item was a crucial sticking point for us in the negotiations. It was apparent to us from years of trying to effect an integrated approach to waste management at Oak Ridge that DOE self-regulation of radioactive waste and radiation sources was a stumbling block to progress.

But, a determined negotiation position by the State produced a new ray of sunshine into this stronghold where the old culture clings tight. There is a new DOE receptiveness to advice, if not regulation, with respect to management of radiological materials and control of radiological hazards. For the first time the State will be provided with a listing of all the current Oak Ridge activities involving radiation. This listing will be at "an appropriate level of detail for an effective radiological oversight program." The state shall use this listing to help target its oversight activities. Oversight shall include review and comment on availability of radiological monitoring data and analysis of that data; the contamination control programs of the facilities; control of radiological releases and sources; control and handling of radioactive wastes; radiological health and safety of the public; removal of on-site soil contamination; shipments of radiological materials to and from the Oak Ridge Reservation; and on-site emergency response plans for radiological incidents.

Our negotiated budget provides for a small staff of state radiation protection specialists who will work in the Oak Ridge plants and labs alongside DOE and contractor personnel. This new cooperative oversight program provides

another reason for optimism regarding further culture change at the operational level. Our radiological health people will bring to the workplaces at Oak Ridge considerable experience in radiological activity oversight in industrial settings where NRC rules apply. We think that through this cooperation, new waste reduction progress will be made and that contamination control will be made much more effective.

CONCLUSION

Two years ago Admiral Watkins faced congressional critics who wanted fundamental reform. Some would have voted to strip control of the nuclear research and production complex from him and DOE and create a new agency or commission. They saw DOE management as essentially bankrupt.

Two years later we can see that management reforms initiated by Admiral Watkins have already begun to reshape the old culture of DOE. We see that Tiger Team assessments, state oversight agreements, contractor reimbursement systems and five-year plans are improvements which are just beginning to yield a part of their full potential. The continued success of these initiatives will depend upon consistent support by the Congress.

Now is the time for the appropriate congressional committees to consult with the States and DOE to find a way to institutionalize reforms that have been made. Congress should now fully embrace the 30-year cleanup goal and should provide for continued, stable external oversight of DOE programs.

The states are highly motivated to provide external oversight since they realize that the public will hold state government accountable for health, safety and environmental protection in any event.

Congress could harness this strong motivation by clearing the lines of accountability between DOE and the States and by putting state oversight funding on a firm, predictable basis.