DOE Orders -- Systemic Issues
Draft White Paper
April, 2007

I. Introduction and Philosophy

The Department of Energy and the National Nuclear Security Administration are stewards to a system of research laboratories and production facilities that, since their establishment, have made unique and often critical contributions to the Nation's energy, economic and national security. Many of these facilities are of a somewhat unusual form: known as GOCOs, these institutions are owned by the federal government but operated in the public interest by Management and Operating Contractors, or M&Os. The M&O contract was established by the Atomic Energy Commission (AEC) as a novel construct specifically to maximize the scientific and research abilities of the nascent national laboratories. This step was taken notwithstanding the fact that the federal government already has at its disposal other robust acquisition contract mechanisms: research and development contracts, service contracts, support contracts, direct government operation, etc. Specifically, the M&O contract was designed as a "hybrid" that would give the government the flexibility to attract world-class scientific talent, and manage and adjust programs and budgets in response to urgent and changing national needs without the need to renegotiate complex changes in the contract document. At the same time, the M&O contract was designed to give contractors the agility and flexibility to operate the laboratories within the basic terms and conditions of the contract to achieve scientific and technical excellence in support of the Department's missions.

Because the M&O contract contains few if any "deliverables," in the usual sense, the construct relies on performance measures to ensure that the contractor is working to the best of its ability. Performance-based management, in stark contrast to compliance-based management, requires that the government determine what the contractors are to do, and leave it to the contractor to decide how to best meet these goals. Only in this way is the original promise of flexibility and agility (and efficiency) of the M&O relationship preserved.

Thus, the philosophy of the original M&O construct is that in almost all areas except those having to do with nuclear operations[1], DOE should specify *what* goals and requirements the contractors must meet and the contractors should be held accountable for meeting these goals and fulfilling the contract requirements in the *manner* in which they see fit. This distinction is the essence of the M&O relationship and the ongoing excellence of our laboratories and facilities is directly tied to our ability to protect and maintain that distinction.

When the Department does wish to change or append requirements to its M&O contracts, the primary method available to it is to issue mandatory requirements through the Directives

[1] In areas related to nuclear operations the government is correctly more directive in delineating specific actions and activities that it requires. Thus, oversight of nuclear safety requirements is handled on a more prescriptive basis, in which contractors propose in advance how they will meet a given requirement for DOE approval prior to execution. The Department's active involvement in approving this methodology is necessary to minimize the possibility of serious negative events because the consequences are unacceptable regardless of subsequent redress.

System—in other words, promulgate a DOE Order. The incorporation of these into the existing contracts is negotiated (in theory; in practice little negotiation occurs) into place over a 1-2 year period. In principle, this provides a mechanism for DOE to express in a consistent voice and with clarity both its intentions and the details of actual requirements it wishes to place on its contractors, the latter via a Contractor Requirements Document which is part of each Order. It also, again in principle, allows for a central repository of contractors requirements available to both current contractors and to those organizations considering bidding on DOE M&O contracts, and obviates the need for each contracting organization to develop its own language.

In this context, DOE Directives are, in principle, an effective and efficient mechanism by which DOE/NNSA can specify contract requirements applicable to the entire complex—but only to the extent that they refrain from prescribing how the contractors should meet them. However, in practice, and over time, a number of forces have worked to expand the number of directives and blur not only the contractual obligations of our contractors but also the lines of responsibility and accountability for contract performance. For example, in response to poor performance by one of its contractors DOE often issues an "Order" which prescribes an immediate solution to the problem. It is usually arguable as to how much additional safety, or security, or performance the Order will effect, but it is nevertheless demonstrable that the Department has taken action. Additionally, because of the nature of the M&O Contract is more flexible, both the contractors and their DOE/NNSA counterparts function in an evolving and sometimes uncertain environment. This drives the desire on *both sides* for the generation of volumes of documentation intended to reduce the need for, and risk of, individual judgment, despite the fact that the exercise of individual judgment is absolutely central to good management. Finally, almost since its inception, there has been a drift within the Department toward a "compliance-based," as opposed to "performance-based" culture, in which DOE views its contractors as if they were it own employees—and dictates to them as such—rather than treat them as contractors and hold them accountable for their performance. As the author of a 1967 Brookings Institution study of the policy issues affecting the AEC's M&O contracts observed, "One of the key contributions of an operating contractor is his freedom of action…If it is being eroded, as some observers charge, then the operating contractor's staff will indeed become merely another and unacknowledged kind of civil servant.[2]

The cumulative result of these forces is a system which today is overburdened by orders, manuals, guides, notices, standards and policy memos which are too often poorly written, unclear, overly prescriptive, duplicative or even contradictory of each other or national laws and standards, often grudgingly or not-at-all agreed to by those affected, and which drive inefficiencies within our system by focusing the efforts of DOE and laboratory staff on compliance activities rather than performance-based outcomes. This continually increases the cost of doing business for the Department and at our laboratories to the detriment of the efficient accomplishment of DOE missions. DOE Senior Management continues to receive feedback from DOE contractors that DOE Directives drive behavior of questionable value that is both inconsistent with program goals and with a performance-based management philosophy.

As one data point we offer the following: in 2006 one of the Office of Science's larger laboratories documented at least 278 on-site reviews, requiring approximately 33,000 hours of

[2] *Contracting for Atoms*, Harold Orlans, The Brookings Institution, 1967, p. 39

contractor time, and directly costing approximately $2.36 million in taxpayer dollars. This number does *not* include reviews of the contractors by the GAO or the Inspector General. It also does not include the costs of creating the systems to monitor the behavior or the costs associated with correcting any "deficiencies" that are found.

Independent analyses of DOE oversight of its contractors, most notably the Galvin Report of February 1995, have long concluded that DOE is hobbling its contractors with mountains of red tape:

> "The net effect [of the DOE approach] is that thousands of people are engaged on the government payroll to oversee and prescribe tens of thousands of how-to functions. The laboratories must staff up or reallocate the resources of its people to be responsive to such myriads of directives; more and more of the science intended resources are having to be redirected to the phenomenon of accountability versus producing science and technology benefits."[3]

More recently, Deputy Secretary Sell addressed a new iteration of the same concerns by chartering an initiative to revisit and revise the Department's response to DNFSB recommendation 2004-1 to eliminate all commitments the Department made in that response which: weaken line responsibility and accountability, contribute to micromanagement, lead to unacceptable risk averse behavior, or violate the principle of the government defines "what" is to be accomplished and contractor defines "how."

II. Where We Are Now: The Problem

DOE Directives are as varied as the issues they attempt to address and are applied differently within Program Offices. Most have clear drivers such as security, safety, business operations, etc. but communicate DOE expectations to a mixed audience of federal, contractor, and subcontractor staff. They become "burdensome" when they are unnecessary to accomplish the assigned mission effectively and safely, prescribe a less than optimum methodology for compliance, or are duplicative of national law and/or standards. Below is a summary of the key factors that make a directive, or a set of directives, burdensome:

- **It's not just the Order.** The impact of a directive flows from a combination of the directive's language, written and oral contractor direction provided, audit expectations, and the contractors' reaction. An overly broad Directive or overly prescriptive guidance can be, and often is, further expanded by DOE implementation meetings, contracting officer and program office discussions, or DOE auditor communications. In addition, the contractors' desire to excel at implementation and avoid audit deficiencies also drives expansion of the Directive's application.
- **One size does not fit all.** Some Directives are written in response to identified weaknesses at a specific facility or expectations from stakeholders such as Congress, DNFSB, and the public. The principles of consistency and application of these "fixes," when applied DOE-wide in the interest of "consistency," mean that

[3] *Alternative Futures for the Department of Energy National Laboratories*, (Galvin Committee Report) February 1995, page A-1.

requirements that are meaningful and necessary at some sites are inappropriate, unnecessary and "burdensome" to others.

- **Dual audiences create confusion.** DOE Directives are written to two distinct populations, federal employees and contractors. Frequently, the attempt to write to both audiences simultaneously results in a document that is confusing to each: the Contractor Requirements Documents (CRD) portion is not written in a style consistent with contract language such that it could be easily appended to the contract, and the federal staff are not subject to the stipulations of the CRD so must either be addressed through duplicative or conflicting guidance in one Order.
- **Multiple sources of contractor requirements proliferate the burden.** Currently, the Department sets contractor requirements in five ways: the three "official" methods of DOE Orders, DOE Notices, and DOE Manuals; the *de facto* "requirements creep" that occurs when auditors issue findings of failure to follow informal "guidance documents," and the "rogue" policy memos that are never reduced to official requirements through the Directives process, yet nevertheless attempt to direct contractor behavior. This profusion swamps the contractors' administrative systems.
- **"Audit bait."** Some directives include language that allows widely varied interpretations. This has two outcomes: first, it induces the contractors to increase the scope of the directive fearing an unconstrained audit application. Additionally the multiplicity of guidance documents, manuals, memo's etc. cloud the picture of what the legal requirements are and thus offer numerous opportunities for auditors and others to create, *de facto*, new requirements outside the directives system.
- **Duplication of National Laws and Standards.** Some DOE Directives include direction to follow federal laws and regulations already required by contract language. Others duplicate elements of recognized national standards such as the Environmental Management System, Integrated Management Systems, Quality Assurance Systems, etc.
- **19th Century filing system in electronic format.** The overall number and system of directives make finding and following DOE requirements taxing to not only to an M&O contractor attempting to be requirements sensitive but also to the Federal staff charged with ensuring that the requirements are being met. Directives are compiled in an electronic format (DOE Directives Home Page) which is a reproduction of paper-based directives. Requirements are not compiled into a usable database that can be managed, revised, and easily searched.
- **The REVCOM process does not work effectively.** While the Review and Comment (REVCOM) system (the electronic tool) is fine, the REVCOM process has at least three major weaknesses.
  - First, the system allows direct input to the Order originator from all the DOE sites. This frequently results in inconsistent and often contradictory comments and suggestions being offered by different portions of a single PSO organization, as well as differing opinions from across organizations. These dilute the message and overwhelm the originator, making issue resolution difficult.
  - Second, the directives system is not fully effective in resolving issues prior to issuance of a new or revised directive, nor in communicating to the Deputy Secretary the diverging views upon which he must arbitrate in the face of a

proposed Order that does not have Department-wide concurrence. Affected parties often have little time (Forty-eight hours is not uncommon) to provide input. Major concerns are frequently not addressed, much less resolved, by the Office of Primary Interest (OPI), and there is currently nothing in the process, short of the threat of a "non-concurrence," to compel the OPI to address PSO concerns. This can become a particularly subtle problem when the proposed order involves significant "how to" sections. For example, PSOs that must implement a proposed direction may not be opposed to the originator's *intent* but have great concern about the operational details. In these circumstances, OPI can't understand how anyone could legitimately oppose the requirement and why they need to respond to the myriad of questions and objections to the details. Conversely, those implementing the directive know that the "devil is in the details" and want a reasonable amount of time to review and evaluate the impacts, particularly unintended impacts, of the proposal. Both sides therefore fault the Directives process – one side because it takes too long, the other because it isn't long enough. PSOs are placed in the awkward situation of appearing to be a road-block to progress, safety, or good sense by non-concurring on the basis of seemingly trivial concerns, or of picking their battles and concurring on Orders in which they do not, in fact, agree. This process does a disservice to the Secretary and Deputy Secretary who ultimately must sign and issue the directives. The Deputy Secretary and Secretary should have the benefit of hearing the Department's Under Secretaries', Assistant Secretaries', and Office Directors' views on all directives, notices, manuals, and guidance.

- Finally, the problems discussed above have led to a DOE Directives system that is viewed by elements within the Department as ineffectual and inefficient, thereby generating a proliferation of documents that circumvent the directives process – documents promulgated without the benefits of any disciplined process.

The Secretary and Deputy Secretary have and must maintain the prerogative to issue any binding Order to be issues as a CRD directive, policy memo, etc. when and how they see fit to assist in managing the Department and specifically, the contractor function. However this type of unilateral action should be used rarely and in consultation with the Under Secretaries responsible for implementation.

III. Guiding Principles and Definitions for a New Way of Doing Things

The fundamental purpose of the DOE directives system should be to facilitate a process by which the Department considers, writes, reviews, and resolves issues with proposed or existing directives, and then promulgates clearly written, necessary, directives that *add value* to performance-based management of the Department's contractors. It should be structured and operated in a manner which does not lose sight of that goal. A performance-based management philosophy dictates that it is the role of the DOE to determine *what* the laboratories should be doing and the responsibility of the laboratories and their contractors to determine *how* to meet these goals. In keeping with this philosophy, we suggest the following principles for 1) what the

product of such a system should be, and 2) how the Department's Orders and Directives system should work.

The Product:

1. Directives should address either federal staff performance or contractor requirements, but not both. In many instances this may mean a pair of directives where once there was a single directive, but the advantages of clarity far outweigh the need for dual documents. Federal requirements with respect to oversight of ourselves and our contractors should be governed by a re-written, all-encompassing DOE Order 226.1.
2. Directives that address contractor performance should:
   - Provide legally-binding contractor requirements, and avoid discussion of general non-binding "guidance."
   - Limit themselves to the extent possible to the CRD.
   - Limit themselves, to the maximum extent possible, to a definition of the level of performance that is expected, and avoid a discussion of, or requirements related to, how the contractor is to achieve these requirements. In those cases where the originator of a directive maintains that a need exists for detailing how the contractor must meet the requirements, a separate, written justification memo (see the discussion of process, below) must be provided to accompany the directive when it is forwarded to the Deputy Secretary for signature. Any objection to this approach by an Under Secretary should be included in the package.
   - Reference existing law or national standards rather than duplicate or slightly modify them.

The Process:

1. The creation of any new directive, or the review of an existing directive, should begin with the Office of Primary Interest (OPI) sending a memo to the Office of Management and Administration (MA) stating the need for and purpose of the proposed directive, with an explanation of the burden the directive will place on the contractors. (Some have likened what needs to occur in this step to a formal Six-Sigma process that would ensure a rigorous cost-benefit analysis of proposed requirements.) Memos lacking an analysis of the potential burden should be rejected. MA should then send the justification memo to the Program Offices for review. Each PSO should be required to reply to MA indicating concurrence/non-concurrence on the memo justifying the need for the directive. It is expected that non-concurrence by PSOs will carry considerable weight.
2. An effective "issues resolution process" must be developed. This should include the following attributes: each PSO should be required to submit one consolidated response to the OPI on any given directive; if issues cannot be resolved and PSOs continue to have major concerns, an opportunity for MA staff to act as an "honest broker" should be built into the process; and, if issues are still not resolved, the paperwork that moves forward to the Secretary and Deputy Secretary should offer majority and minority opinions of the proposed directive, and not be limited to concurrence and non-concurrence.
3. Work on directives that are currently in process or which come up for review and revision should be delayed until the original justification-cost/benefit step in the process has been completed.

4. In the near term, MA should conduct a survey to identify any rogue guidance, memos, etc., and put a 9 month expiration date on them. Renewal of these as directives, and consequently submitting them to the rigorous process described above, would be necessary for their continued existence.
5. As directives are established or revised, they should be compiled into a new electronic database that is easy to navigate and in which requirements resulting from Orders can be searched easily.
6. Within 1 year after issuance of an Order, impacted organizations should be queried by MA as to "unintended consequences" that may have resulted from implementation of the Order. This information should be used to: 1) determine if changes to the Order are warranted; and 2) to serve as lessons learned to preclude future implementation problems.

NNSA's Oversight Plan at the Kansas City Plant is good example of how oversight at a non-nuclear site can be based on a model of strong DOE contract management and functional management by the contractor and its parent corporation. An essential part of the KCP Initiative was to examine the risk and direction provided by DOE Directives included in the contract. KCP has already implemented many industrial standards (such as ISO 9001, ISO 14001, the Voluntary Protection Program) in lieu of DOE Directives, and streamlined those that were not modeled on industrial practices. Past experience had shown that this industrial model approach increased performance and reduced cost. The new KCP Initiative expanded this success and included reduction in security directives, management and administration directives, ES&H directives, and asset management directives. The fundamental expectation for contractor performance remained unchanged. The KCP Initiative success will be evaluated in 2008 but is expected to show sustained contract performance with major reduction in operational cost of the contract at KCP.

NNSA's experience with the KCP Initiative confirms the following lessons on directives:

- While the actual cost of implementation of directives might be small, the cost of implementation expands with DOE/IG auditor unconstrained expectations, verbal and written guidance outside the directive system, and contractor's implementation beyond compliance.
- It maybe only part of a directive that is burdensome. Additions of "bells and whistles" make the valuable objective in directives more costly.
- Directives include deliverable reports needed/required by the agency. Then deliverable preparation guidance becomes subject to audits where only the deliverable is the desired contract performance issue.
- Management expectations contained in Directives such as ISMS, CAS, ISSSM, etc. overlap contract clause requirements. The expectation of a single, integrated management system by our contractors is lost in directive expectations for management systems that meet separate expectations.
- Where available use of industrial standards and independent third party assessments can meet DOE Directive objectives and provide federal assurance to a consistent level of performance. DOE Directives, in general, do not permit use of industrial standards to meet DOE Directives and then only if equivalency can be proven.

V. Conclusion: Risks and Rewards of New Approach

Two major issues are the focus of this paper: the process the Department uses to promulgate requirements to itself and it contractors, and the content of the requirements we place upon our contractors. The latter is at the heart of what we believe to be the merits of the M&O contract vehicle, our ability to hold our contractors accountable for their performance, and the level of risk the Department is willing bear. To do more than just "nibble the edges" of the directive problem will require Undersecretary-and-above level decisions about the level of risk the Department will accept in return for a more flexible, unencumbered Department and effective set of laboratories.

Making changes to the directive promulgation process, by contrast, is not difficult in principle, but will require significant effort and policing to enforce. In this review of the Directives process, it has become apparent that the Department is not devoting sufficient effort to execute effectively the process of developing good operational policy. This is true within MA and within the Program Offices, particularly in the area of issue resolution. The Deputy Secretary should task MA with an analysis of the staffing and skills required to operate an effective Department-wide directives system, but should not let this analysis delay progress on implementing the changes described above.