

PRIVATIZATION AND OTHER POST-CONTRACT REFORM PROJECT DELIVERY METHODS: WHAT WORKS BEST AND WHY

By: John C. Person
Person & Craver LLP
Washington, D.C.

ABSTRACT

This paper explores the successes and failures of privatization and other contract reform initiatives within the DOE Weapons Complex over the past seven years. The paper concludes that the successes and failures of these project delivery methods depend largely on the risks attendant with the project itself. For example, where the wastes to be remediated defy characterization and the technology is innovative, the Department ordinarily should bear most of the risk, and some specie of cost-reimbursable contracting should be employed. On the other hand, where the risks are readily quantifiable and the technology is proven, more of the risk and responsibility can and should be placed on the contractor. This form of risk transference runs the continuum from lump-sum contracting to design/build, to privatization, depending on the circumstances. The preferred contracting form, however, is not dictated solely by project-related risk. Onto this risk must be overlain a set of risks that derive from the project management capabilities and the institutional biases of the oversight M&O or M&I contractor. Foremost among this additional set of risks is the ability of the oversight contractor to employ a level of contractual interface that is commensurate and proportionate with the selected project delivery method.

More specifically, this paper concedes that the pre-contract reform contract delivery method of choice, cost-reimbursement contracting, was overdue for change as it promoted pricing inefficiencies. This paper concludes, however, that the post-contract reform wholesale embrace of privatization as a panacea to the Department's contracting woes was equally wrongheaded. Rather, depending on the circumstances, lump-sum contracting or design/build contracting might be the preferred alternative to cost-reimbursement contracting. In certain select situations, however, where a quantifiable through-put product can be identified and a "take or pay" pricing mechanism can be employed, a privatized contract form will present the best choice. The paper then analyzes particular projects with the foregoing points in mind. That analysis reveals that while some post-contract reform projects have been striking successes, others have become colossal failures. The paper closes with a proposed checklist of the criterion for selection of contract delivery methods for upcoming projects.

A RETROSPECTIVE ON CONTRACT REFORM AND PRIVATIZATION

The Need to Overcome the Status Quo: The "M&O Mentality"

At the close of the Cold War in the late 1980s and early 1990s, the principal mission of the Department of Energy's Weapons Complex began to shift from the

production of weapons-grade nuclear material to the cleanup of fifty years' worth of legacy nuclear and mixed wastes. Unfortunately, the culture that permeated the production of nuclear material also permeated the early cleanup efforts. That culture was based upon an implicit bargain struck between the Department and its Management and Operations (M&O) contractors that all incurred costs would be paid as allowable costs provided that the contractors protected the National interest by maintaining program secrecy. While that compact worked well in the earlier production era, it did not transfer well to nuclear and environmental remediation projects. Once the mission turned to environmental remediation, employees of M&O contractors did what they always did: minded the process without any special regard to whether that process produced results. Some sites even had special nicknames: For example, Hanford was known in some circles as "The Lazy 'H'."

This mind-the-process mindset, derisively called the "M&O mentality," drew the ire of Congress. Beginning in the late 1980s, Congress commissioned its watch dog and oversight agency, The General Accounting Office (GAO) to study DOE contracting practices. These studies culminated in a handful of GAO reports that roundly criticized the Department and its Environmental Management (EM) programs as being costly, wasteful, and inefficient. In the early 1990s several industry consultants conducted studies that benchmarked DOE remediation projects with comparable "outside-the-fence" projects. These studies corroborated the GAO findings and concluded that DOE remediation projects were significantly over budget and behind schedule as compared with comparable projects both inside and outside the Government. Something had to be done.

The Mid-1990's Contract Reform Initiative

Probably the capstone of Secretary Hazel O'Leary's achievements at the DOE in the early- to mid-1990's was her leadership in assessing the Department's contracting weaknesses and in promulgating regulations to implement what was widely referred to as "Contract Reform." Commencing in "Town Hall" meetings in the fall of 1993, this reform initiative culminated in a report issued in February 1994 (Reference 1). That report, which contained 48 recommendations, addressed three key areas: (a) selecting alternatives to traditional contracting arrangements used for management and operation of its sites; (b) increasing competition to improve performance; and (c) developing and using performance-based contracting tools. To facilitate and oversee the implementation of the contract reform recommendations, in 1994 DOE established the Contract Reform Office. In 1997, that office became the Office of Contract Reform and Privatization. That office, in turn, was abandoned in 2001 as part of a reorganization effort, and its functions transferred elsewhere within the Department.

The contract reform initiatives themselves were implemented via final rule in June 1997. *See* 62 Fed. Reg. 34842. The cornerstone provision to this final rule was the performance-based contracting provision set out at the DOE Supplement to the Federal Acquisition Regulation (DEAR) 970.1001. There, DOE mandates that performance-based features be incorporated into the Department's M&O contracts to the maximum

extent practicable. Additionally, the regulation goes to the very nub of the Contract Reform Team effort in that it clearly directs that work statements be framed in terms of “performance” specifications, and not as “design” or “prescriptive” specifications. In that regard, the rule goes on to provide that statements of work “should describe performance requirements and expectations in terms of outcome, results, or final work products, as opposed to methods, processes, or design.” *Id.* The rule signals a clear endorsement of the design-build contract delivery format, as with that model, the contractor is responsible for selecting the methods, processes, and designs to meet Department-prescribed performance requirements. By extension, that rule also would seem to encourage the use of privatized contracts, in that a privatized contract is necessarily predicated on a design-build contracting structure.

The Present Day Perspective on Contract Reform

With the benefit of a five-year operating history on the implementation of the Department’s contract reform initiatives, it is now clear that certain measures went too far whereas certain other measures did not go far enough. Additionally, while the family of contract reform regulations promulgated in 1997 certainly has sensitized the Department and its contractors to the objectives of contract reform and has no doubt yielded some benefits, there still has not been put in place a set of metrics or objective measures of the quantitative benefits of contract reform.

During the mid-1990’s, persons inside and outside of the Department viewed “privatization” as the panacea that potentially could cure the contracting ills that were then endemic within the DOE contracting community. The author, himself, served on several privatization task forces during that period. Before critiquing the use of privatization, however, it is useful to define the term. “Privatization” has meant many things to many people. For example, privatization variously was interpreted to embrace outsourcing, divestiture, deregulation, and asset transfer. The Department itself has gone so far as to use the term synonymously with ordinary firm, fixed-price construction contracting. For purposes here, however, the term “privatization” refers to a project finance-based model whereby private contractors design and build facilities to treat waste streams on a through-put, unit-priced basis.

While some attempts to use privatization have worked well, others have failed, some spectacularly. Perhaps the poster boy for privatization failure is the “Pit 9” cleanup at the Idaho National Engineering and Environmental Laboratory (INEEL). In 1994, the contractor on the Pit 9 project, Lockheed Martin Advanced Environmental Systems (LMAES), was awarded a \$200 million fixed-price contract to perform the remediation of Pit 9, which had served as a radioactive waste disposal pit. Midway through performance, however, LMAES walked off the project, seeking \$257 million for its performance through June 1997. To date, DOE has been fined approximately \$1 million by state and federal regulators and has set aside another \$5 million in a fund to be tapped if DOE fails to meet future cleanup milestones. Another high profile privatization failure was the Tank Waste Remediation System (TWRS) contract at the Hanford site. The TWRS contract was structured on a pure project finance model where payment was to be

made on a unit priced basis for units of waste processed. The Department terminated that contract in the spring of 2000 after the contractor sought to adjust its pricing upward by more than two-fold. On a much smaller scale, a privatized project for processing wastes at the Oak Ridge K-25 uranium enrichment plant also encountered problems resulting in a suspension in performance and an associated contract dispute.

What did the foregoing privatization failures have in common with each other? First, the contaminated material to be processed either was not fully characterized, defied characterization in the first instance, or was otherwise unacceptably heterogeneous. Second, the proposed remediation process or processes either were state of the art or close to it. In other words, the projects presented considerable technological risks. Third, the contractors appear to have been convinced by their own hubris that their treatment capabilities were so robust that they could successfully treat the material, no matter what the characterization. More fundamentally, however, these failures represented a failure in choice of delivery method. The Department never should have shifted characterization risk and technological risk onto the contractors in the manner that it did given the risk profiles presented by the projects. Unfortunately, however, in seeking a wholesale departure from the “M&O mentality” of cost-reimbursable contracting model of the past through its contract reform initiatives, DOE selected the most risk-sensitive contracting model available: the privatization model. In hindsight, this appears to have been an example of running before one learns to walk. The point to be made is that while straight cost-reimbursable contracting may not be the way to go, going to the opposite end of the contracting continuum with privatization presented an antidote whose side effects were more deleterious than the benefits of a possible cure.

Apart from these privatization missteps, the GAO most recently has criticized DOE’s contract reforms from an accountability perspective. In its September 2002 report (Reference 2), the GAO lauds the progress made in developing alternative contracting approaches, increasing competition, and in utilizing performance-based contracts, but criticizes the Department for failing to employ best management practices in selecting the contracting method or in measuring the results of the contracting reforms. With respect to the first criticism, that DOE had not developed a suitable acquisition strategy, the report notes that the Department indiscriminantly utilized fixed-price contracting for appropriate contracts, such as laundry processing contracts, and for inappropriate contracts, such as the Pit 9 fiasco. Concerning the second criticism, the absence of metrics, GAO believes that anecdotal evidence suggests that the contract reforms have had a positive effect, but believes also that best management practices dictate that the Department incorporate four elements as part of the measurement process: (a) clearly defined goals; (b) an implementation strategy that sets milestones and establishes responsibilities; (c) results-oriented outcome measures, established early in the process; and (d) systematic use of results-oriented data to evaluate the effectiveness of the initiative and make additional changes where warranted.

A RISK-BASED APPROACH FOR SELECTING CONTRACT DELIVERY METHOD

Introduction

One way to order the various contract delivery methods available for use by the DOE is to rank them by risk profile. From the contractor's perspective, at the low end of the contracting continuum is the cost-reimbursable contract. Under that form of contract, the Department bears the bulk of both cost risk and performance risk. Next on the continuum are firm, fixed-priced contracts where the Department (or upper-tier contractor, as the case may be) provides a completed design to be performed by the contractor. With that contract delivery method, cost and performance risk is shifted onto the contractor, whereas design and technical risk is retained by the Department. One step higher is the design/build or "turnkey" form of contracting. With that organizational form, the contractor not only provides a firm, fixed price to the Department for the work, the contractor is responsible for developing the design as well. By being responsible for providing a design that meets the Department's performance specifications, the design/build contractor impliedly warrants that the design will meet all the salient features of the performance specification and will be held to be financially responsible for ensuring such compliance. At the far end of the continuum is the privatized contract. The privatized contractor bears all the risks of the design/build contractor plus the additional risk of financing the project until production of through-put is achieved.

As an aside, the Department has recognized the need to develop a more systematic approach to determining the best contract type for a given situation. For example, in October 2000, DOE issued new policy and guidance for the acquisition of capital assets such as waste treatment facilities. In addition, to strengthen oversight of major acquisitions, in November 2001 DOE issued additional guidance that requires approval of acquisition plans for projects of \$5 million and above at the assistant secretary level or higher.

The discussion below compares the use of the foregoing contract delivery methods in the DOE Weapons Complex and draws some conclusions as to which forms of contracting work best and why. The conclusions are based on both the public record as well as on the writer's personal experience with these contracting forms at the major DOE sites.

Cost-Reimbursable Contracting

Cost-reimbursable contracting is appropriate where the costs and/or technologies may not be sufficiently refined to allow for firm, fixed-priced contracting. Much of the mid-1990s contract reform effort was undertaken with the goal of finding suitable substitutes for this contracting form, as cost-reimbursement contracting places no incentive on the contractor to minimize costs. By now requiring that cost-reimbursable contractors place a higher percentage of their fee at risk, the Department has taken steps to incorporate performance-based concepts into these contracts. As noted by the recent

GAO report (Reference 1), however, much still needs to be done to ensure that the performance-based features now included in these and other DOE contracts actually do, in fact, enhance performance.

For those environmental remediation projects that present significant challenges in characterization and the like, cost-reimbursable contracting may be the only viable option. In hindsight, projects like Pit 9 might have been better run had the contract been cost-reimbursable in nature. However, benchmarks and controls need to be included in such contracts to verify cost allowability, cost allocability, and cost reasonableness. One specific recommendation here is to subject all cost-reimbursement contracts to an after-the-fact review to determine whether the contractor exhibited prudent business judgment in all matters concerning contract performance. The prudent business judgment standard against which the contractor would be measured is whether the contractor acted in the same manner as a prudent person in the conduct of a competitive business. Any finding that the contractor did not exercise prudent business judgment would lead to a disallowance or reduction of the affected costs, as per the requirements of Part 31 of the Federal Acquisition Regulations.

Firm, Fixed-Price Contracts

The use of firm, fixed-price contracting is appropriate when projects are well-defined, when uncertainties could be allocated between DOE and the contractor, and when either adequate cost information or multiple competing bidders were available to determine a fair and reasonable price for the work. In the writer's view, firm, fixed-pricing contracting should be the presumptive contracting form utilized within the DOE Weapons Complex.

The beauty of firm, fixed-priced contracting is that the M&O contractor is forced to select a detailed design it deems most appropriate for the project and warrant that design to the subcontractor. That design is included in the Request for Proposals and contractors are able to perform a detailed quantity "take off" from the design drawings from which the contractor is able to submit a bid. Vis-à-vis the subcontractor, the M&O contractor under this model is unable to modify the design without reimbursing the subcontractor for changing the subcontract. Unlike with the design/build contract delivery method, discussed immediately below, the M&O contractor is not as apt to meddle with the subcontractor's performance.

Design/Build or Turnkey Projects

In the writer's opinion, the use of the design/build contract delivery method in the DOE Weapons Complex has met with mixed results, at best. The chief reasons for this conclusion are: (a) the M&O contractors do not employ a true design/build model allowing for "phased" construction; (b) the M&O contractors employ an inappropriately high level of design interface and often place their own imprimatur on the design; and (c) design/build is utilized where the initial conditions are not fully defined. The writer will illustrate these points by examining three projects with which he was personally

involved: (a) the Effluent Treatment Facility (ETF), built in the Hanford 200 East Area in 1992-94 timeframe; (b) the Groundwater Treatment Facility (GTF), built in the SRS “F” and “H” areas in the 1995-97 timeframe; and (c) the Tritium Support Facility (TSF), built in the SRS Tritium area in the 1998-99 timeframe.

The principal failing of design/build contracting within the DOE Weapons Complex is that the contract format does not allow for “phased” construction, the chief hallmark of that contract type. Outside the DOE, design/build projects are noted for their ability to “fast-track” design and construction such that once the foundation drawings are complete the foundation can be built, notwithstanding that the mechanical and electrical design work might not be complete. This feature enables the design/build contractor to overlap or “phase” design and construction and shorten the overall project schedule. None of the three sample projects identified above allowed for this feature. Rather, all three projects provided for a formal review of the interim design followed by a formal review of the final design. Construction was not allowed to commence until all comments on the 100% design submission were addressed and dispositioned. Probably a more accurate description of design/build within the DOE Weapons Complex is “design-and-build.” In hindsight, all three test cases experienced schedule delays and the affected design/build subcontractors could have benefited greatly from the ability to utilize phased construction. Another peculiar feature of DOE design/build projects not found in commercial contracts is that once the M&O contractor approves of the design/build subcontractor’s detailed design, that approved design becomes very difficult to change. Again, this inability of the design/build subcontractor to modify its design to satisfy the M&O contractor’s performance specification runs contrary to the less onerous commercial design/build practices.

A second major failing of design/build contracting within the DOE Weapons Complex is that the design/build subcontractor’s proposed designs are subjected to a disproportionately high number of comments. For each of the three referenced projects, the numbers of comments on the design/build subcontractor’s designs totaled in the hundreds (comments generated on the ETF project totaled 550). Moreover, a good number of these comments were of the “design preference” variety whereby the reviewer would substitute his own design choices for the equally acceptable choices made by the subcontractor. Under either scenario – either too many comments or comments of the wrong type – the M&O reviewing contractor exceeded its limited function to ensure that the proposed design satisfied the form, fit, and function parameters of the performance specification. This phenomenon may be a vestige from a time where the M&O contractor could take its time reviewing designs from outside architect / engineers before re-packaging those designs, as so reviewed, as part of a firm, fixed-priced contract.

The third problem identified with the application of design/build contracting to DOE projects is that the contracting form is not appropriate where the existing conditions are not fully known or characterized. In at least two of the referenced projects (the ETF and the GTF projects), the M&O contractor provided groundwater characterization data that was either incomplete or otherwise not useful. This, in turn, caused the design/build

subcontractor to make incorrect design choices that increased the subcontractor's cost and delayed the project schedule.

While the post-contract reform regulation DEAR 970.1001 requires that DOE incorporate performance-based features into its M&O contracts and requires the use of "performance" specifications over "design" or "prescriptive" specifications, recent history suggests that the M&O contractors, themselves, are less adept at flowing down such provisions in through the use of design/build subcontracts. Accordingly, unless and until the M&O contracting community can demonstrate that they can administer design/build contract in an efficient and cost-effective manner, the contracting vehicle of choice should remain the firm, fixed-price contract.

Privatized Projects Based on the Project Finance Model

Above, it was shown that the Department's foray into privatization for several waste treatment projects in the mid-1990s was improvident. The technical risks and pricing risks were far too large and unknown for a contractor to accurately assess and absorb. There have been several shining examples, however of the proper use of privatized projects in the DOE Weapons Complex.

One such example of the proper use of privatization is DOE's nuclear laundry contracts. In the early 1990s, DOE was faced with the need to replace Hanford's forty-two year old decontamination laundry facility. The estimated cost to build a new facility on the Hanford site was over twenty million dollars. In an effort to find a more cost-effective solution to providing Hanford's needs, the Department decided to issue a competitive solicitation to acquire offsite nuclear laundry services. The winner of the competition was Interstate Nuclear Services, Inc., which has since been renamed UniTech Services Group, Inc. UniTech built and permitted its Richland facility in early 1993 and began processing Hanford's nuclear laundry at that facility commencing in August 1993. By its own estimate, DOE has saved approximately three million dollars per year in operating costs and has avoided spending twenty-two million dollars to construct a new onsite laundry facility. As an added benefit, this privatization effort created a new business to the City of Richland, WA that has created private sector jobs and has contributed to the City's economic diversification efforts (Reference 3, pp. 58-59). A Congressional investigation of the Pit 9 problems reached the same conclusion in contrasting the success of the nuclear laundry contracts with the problems that plagued the privatized Pit 9 project. One of the reasons that the DOE can point to this contract with pride is that the Department locks-in fixed unit prices that are paid only for the nuclear laundry that is actually processed.

Another privatization success story is the turn-over of the 70 megawatt electric and steam generating powerhouse from the Savannah River Site (SRS) M&O contractor to South Carolina Electric and Gas Co. (SCE&G). This privatization was accomplished through a utility contract that included a ten-year lease for the site's D Area powerhouse, supporting facilities, and steam pipelines, and a 40-year lease for transmission facilities and substations. The base contract runs from 1995 to 2005. The Department has

estimated that this asset transfer to SCE&G will save DOE more than \$150 million in cost reductions for power and steam during the course of the ten-year contract (Reference 3, pp. 59-61).

The keys to success for both of these projects are: (1) the services to be privatized present a well-defined scope; (2) the services are recurring in nature with a stable and predictable level of effort; (3) the Department was able to off-load potential unused capacity and underutilized overhead; and (4) the Department was fortunate to select two best-in-class companies that are recognized leaders in their respective industries (UniTech for nuclear laundry and SCE&G in utility services).

CONCLUSION

For a variety of reasons, most subcontracts placed by M&O contractors should employ the firm, fixed-price contract delivery method. The use of the design/build contracting model should be limited only to those situations where multiple processes can satisfy the desired results and where the M&O contractor can demonstrate that it will employ a “hands off” interfacing strategy. Otherwise, the choice should be firm, fixed price. Only in exceptional circumstances should other contract delivery methods be employed. For projects that present significant uncertainties involving cost or technology, a species of cost-reimbursable pricing may be most appropriate. Performance under such contracts, however, needs to be monitored and then measured to ensure that the subcontractor satisfies the prudent business judgment test. In certain other cases, such as nuclear laundry contracts, a project financed-based privatization contract may be the most appropriate contracting vehicle.

REFERENCES

1. Report of the DOE Contract Reform Team: Making Contracting Work Better and Cost Less (February 1994).
2. GAO Report to the Secretary of Energy: CONTRACT REFORM – DOE Has Made Progress, but Actions Needed to Ensure Initiative Have Improved Results (GAO-02-798, September 2002).
3. Harnessing the Market: The Opportunities and Challenges of Privatization, a Report to the Secretary of Energy (October 1996).