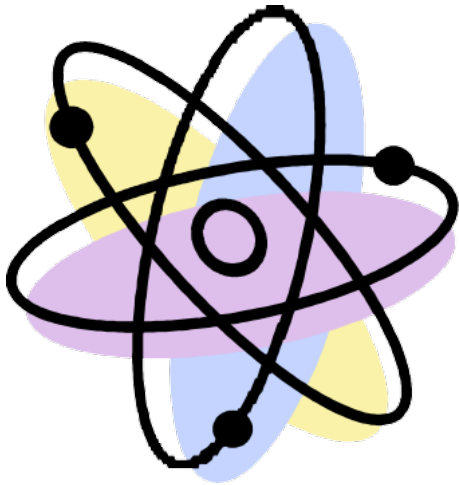


The Origin, Characteristics, and Significance of the Department of Energy's Management and Operating (M&O) Form of Contract



Guiding Principles

- The use of the Management and Operating (M&O) form of contract must be authorized by the Secretary of Energy.
- The Federal Acquisition Regulation recognizes the special nature and need for M&O contracts.
- M&O contracts are key to DOE's continued success in carrying out its mission.

[References: [FAR 17.6](#), [DEAR 917.6](#), [DEAR 970](#)]

1.0 Summary of Latest Changes

This update makes administrative and formatting changes.

2.0 Discussion

This chapter supplements other more primary acquisition regulations and policies contained in the references above and should be considered in the context of those references.

2.1 Introduction. “Management and operating” (M&O) contract is a term used to describe the contracts that are central to the Department of Energy’s (DOE’s) business model. The term was adopted formally in a memorandum from the Secretary of Energy, dated October 5, 1983¹. However, these contracts predate the inception of the term by more than thirty-five years, dating to contracts awarded by the Corps of Engineers during World War II, and other contracts awarded by the Atomic Energy Commission (AEC) from its creation in the Atomic Energy Act of 1946.

¹ For clarity and convenience, this analysis uses the term “management and operating contract” or “M&O contract” for the contract structure though at times prior to the October, 1983 memorandum were known by such terms as “on-site contracts,” “operating contracts,” “major cost type contracts,” or other comparable terms.

It is well known that the two atomic bombs that ended World War II in the Pacific were manufactured under the contracts awarded by the Corps of Engineers. Neither the scientific expertise responsible for the physics underlying the development of the bombs nor the manufacturing and engineering expertise that produced the bombs existed within the Federal government. The Corps acted as project manager, relying on scientists from academia and the engineering and construction skills of industry. As a result of the speed with which the Corps of Engineers' Manhattan Engineer District successfully concluded the production of the atomic bombs, Congress decided to carry that scientific, technical, and business model forward into the organization of the AEC.

The Energy Research and Development Administration (ERDA) from 1974 to 1977, and, the Department of Energy, from 1977 to the present, successor agencies to the AEC, have carried forward the business and scientific model inherent in management and operating contracts. DOE relies upon the M&O contractors for the performance of the substantial part of the agency's mission. That reliance, among other things, allows DOE's staffing to be a fraction of what would otherwise be necessary to conduct its complex and multi-faceted mission.

The remainder of this discussion is devoted to the presentation of the evolution of the M&O contracting model, external recognition of the M&O contract, the characteristics of such contracts, the terms of such contracts, and decisions to use the contract.

2.2 Original Design of M&O Contracts. What today are known as DOE's Management and Operating contracts began during World War II. The Manhattan Engineer District was the governmental entity responsible for the design, development, and production of the first atomic bombs, an undertaking, to that time, without precedent. This massive effort achieved its challenging objective on a schedule that was almost unimaginable. Over a two year period the theoretical science was advanced, the technology necessary to produce the necessary components was developed and applied, and some of the most complex and largest manufacturing facilities the world had known were designed, constructed, and brought into full operation in remote, and previously undeveloped, locales within the United States. The successful completion of the Manhattan Project resulted from the Government's substantial reliance upon private industry and educational and other nonprofit institutions for the critical scientific and business expertise.

In 1946, following on the success of the Manhattan Project, Congress created the Atomic Energy Commission to design and produce nuclear weapons, to develop nuclear energy as a source of electricity, and to research the use of nuclear energy in medicine. The legislative history of the Atomic Energy Act of 1946 indicates the basic principle that underlies M&O contracts was that the AEC, a predecessor of DOE, was to employ highly capable companies and educational institutions to carry out the actual performance of the agency's mission; that is, these contractors were to perform the agency's mission as opposed to the agency's using civil servants. "Wherever possible, the committee endeavors to reconcile Government monopoly of the production of fissionable material with our traditional free-enterprise system. Thus, the bill permits management contracts for the operation of Government-owned plants so as to gain the full advantage of the skill and

experience of American industry.”²

The Ninth Semiannual Report to Congress by the Atomic Energy Commission stated a more detailed intention of the Commission:

The firms operating large Government-owned production plants, carrying on extensive development projects, and undertaking urgent construction jobs, work in close day-by-day cooperation with the Commission and its staff. They have been selected for their competence, and the Government is contracting with them not only for technical ability but for managerial ability as well. The working relationship between the Commission and its operating contractors resemble in some respects those between industrial companies and their branch offices. The contractor undertakes to carry on an extensive operation; the Commission establishes the objectives and makes the decisions required to fit the operation into the national program, and exercises the controls necessary to assure security, safety, desirable personnel administration, and prudent use of the public funds.³

The report also presented four basic principles relating to the operating contractors:

(a) The contractor recognizes that the AEC is responsible under the law for the conduct of the atomic energy program.

(b) The AEC recognizes that the contractor is an established industrial, business, or academic organization with proved (sic) capabilities, both technical and administrative.

(c) The contractor recognizes that the proper discharge of the AEC responsibilities requires that the AEC shall have full access to information concerning the contractor's performance of the contract work and the power to exercise such control and supervision under the contract as the AEC may find necessary.

(d) Both the AEC and the contractor recognize that the proper discharge of the contractor's responsibilities for management requires that it shall, to the fullest extent compatible with the law, exercise its initiative and ingenuity carrying out the contract work.⁴

The special nature of the work performed by the AEC and its operating contractors was reflected in 1949 when Congress enacted the Federal Property and Administrative Services Act (FPASA) establishing, among other things, an outline for the Federal procurement system. That statute included a provision, referred to as "nonimpairment authority," specifying that nothing in FPASA "shall impair or affect" the authority of the Atomic Energy Commission to perform its missions.⁵

Subsequently, Congress expanded the mission and authorities of the AEC with its enactment of the Atomic Energy Act of 1954. That Act has provisions that recognize the AEC's potential reliance

² S.Rept. 1211, 79th Cong. 2d Sess. 15 (1946).

³ U.S. Atomic Energy Commission, Ninth Semiannual Report 57 (1951).

⁴ *Id.* at 61-62.

⁵ 40 U.S.C. § 474(d)(17), since recodified at 40 U.S.C. § 113(e)(12)(2000).

upon contractors for performing portions of its mission. In 1958 the Act was amended to provide a system of indemnification of AEC contractors and public utilities against liability for nuclear incidents.⁶

As a result of the enactment in 1974 of the Energy Reorganization Act, the AEC no longer exists. Its nuclear regulatory functions were taken over by the Nuclear Regulatory Commission, and its nuclear research, development, and weapons production were taken over by the Energy Research and Development Administration (ERDA). The "operating contracts" continued to play the same role in ERDA that they had performed in the AEC, that is, to perform the substantial portion of the agency mission. Many pieces of non-nuclear legislation, *e.g.*, the Federal Nonnuclear Energy Research and Development Act of 1974, expanded ERDA's and DOE's missions substantially, resulting in a commensurate expansion of the missions of M&O contracts.

M&O contracts continue to serve their necessary function within the Department of Energy, and more recently, its security component, the National Nuclear Security Administration, since its organization in 1977.⁷

2.3 External Recognition of the Unique Nature of DOE's M&O Contracts. M&O contracts have received special regulatory treatment in the Government-wide Federal Acquisition Regulation (FAR), adopted in 1984, long after the creation of the contracts that have become known as M&O contracts.⁸ The FAR, at Subpart 17.6, recognizes and codifies the special identity that M&O contracts have with an authorizing agency. The FAR coverage recognizes the special extend/compete process, it requires special statutory authority for an agency to establish an M&O contract, requires Secretarial designation of the M&O contracts, and authorizes agency acquisition regulations that deal with the special nature of M&O contracts. Under the authority of Subpart 17.6, the Department of Energy Acquisition Regulation (DEAR) has a Part 970 that supplements the FAR and governs the solicitation, award, and administration of DOE's M&O contracts.

Various pieces of legislation enacted by Congress have explicitly dealt with DOE's M&O contracts, recognizing their special relationship with DOE and its predecessor agencies and the special importance of these M&O contracts to the nation. For instance, the Bayh-Dole Act, Pub.L. 96-517, enacted in 1980, reversed the then dominant rule that the Government would take title to inventions first conceived or reduced to practice under Government contracts by granting small businesses, non-profit organizations, and educational institutions the opportunity to elect title to those inventions. The statute recognizes that it would impact title to inventions under DOE's M&O contracts.⁹ In doing so, the Act provided authority for DOE to retain title to inventions in DOE's nuclear propulsion and weapons related programs.

⁶ Pub.L. 85-256. As a result of subsequent amendments, principally the Price Anderson Amendments Act of 1988, Pub.L. 100-408 the Price-Anderson indemnity now applies to DOE contracts under which there is a risk of public liability from a nuclear incident. Congress recently extended the the Price-Anderson Act, among other changes, until December 31, 2025 with enactment of the Price-Anderson Amendments Act of 2005, §§ 601-611 of Pub.L. 109-58.

⁷ Congress had opportunities in 1974, at the organization of ERDA, in 1977, at the organization of DOE, and at any time since to enact legislation to alter DOE's business model, but it has not done so, reflecting an understanding of how integral the M&O contract continues to be to DOE's business model.

⁸ See further discussion *infra* at 8, subsection 2.5.2 of this analysis.

⁹ 35 U.S.C. § 202(a).

The Department of Homeland Security (DHS), by law, has special access to DOE's national laboratories and other DOE facilities that are managed and operated by DOE's M&O contractors in support of its mission.¹⁰ Though generic, NRC has a statutorily based special access to DOE's laboratories.¹¹

In addition, various other Federal agencies have at times recognized DOE's "special relationship" with its M&O contractors. Prior to enactment of the Competition in Contracting Act in 1984 and its explicit grant to the General Accounting Office¹² of bid protest authority, the Comptroller General asserted jurisdiction over protests against the award of subcontracts by DOE's M&O contracts, a very limited instance of GAO's assertion of protest jurisdiction over the award of subcontracts under a specific type of contract.¹³ Under the Brooks Act, since repealed, governing the acquisition of automatic data processing equipment (ADPE), DOE had a special delegation of procurement authority from the General Services Administration for purchases of ADPE by the M&O contractors. The Department of Labor recognizes the special identity of M&O contracts for the purposes of its administration of the Service Contract Act of 1965, as amended. The U.S. Trade Representative has provided for special treatment for DOE's M&O contractors in its negotiation of the General Agreement on Trade and Tariffs and North American Free Trade Agreement.

Finally, the Supreme Court opined that management and operating contracts are a unique type of contract, in that they have a special identity with DOE and indicia of agency without actually causing the contractors to be agents of the Department. The Court stated:

[I]n several ways DOE agreements are a unique species of contract, designed to facilitate long-term private management of Government-owned research and development facilities. As the parties to this case acknowledge, the complex and intricate contractual provisions make it virtually impossible to describe the contractual relationship in standard agency terms. . . . While subject to the general direction of the Government, the contractors are vested with substantial autonomy in their operations and procurement practices.

. . . .
AEC management contracts were developed in an attempt to secure Government control over the production of fissionable materials, while making use of private industry's expertise and resources¹⁴

2.4 Historical and Continuing Scientific and Technical Accomplishments Attributable to DOE's M&O Contracts. Over the seventy years since the organization of the AEC and the institution of M&O contracts, the Government has enjoyed remarkable benefits from the world class research and the innovative technical accomplishments of M&O contractors.

¹⁰ Sec. 309 of the Homeland Security Act of 2002, Pub.L. 107-296.

¹¹ Sec. 205 of the Energy Reorganization Act of 1974, Pub.L. 93-438.

¹² Now the Government Accountability Office.

¹³ 54 Comp. Gen. 767, 784 (1975).

¹⁴ United States v. New Mexico, 455 U.S. 720, 723(1982).

For example, the M&O laboratory system has consistently produced Nobel Laureates. R&D Magazine has listed hundreds of DOE or predecessor agency research projects among its annual top 100. The naming of Nobel Laureates and the recognition of DOE laboratory research continues to occur at a relatively constant rate, repeatedly confirming the scientific excellence of DOE laboratories.

Recognition of the quality of science performed by DOE's M&O contractors is illustrated by the number of DOE's M&O laboratories that are identified as Federally Funded Research and Development Centers (FFRDCs). FFRDC status designates a laboratory or facility as a member of a group of unique organizations formed to assist the United States government in addressing specific long-term areas of considerable complexity. FFRDCs assist the United States government with scientific research and analysis, systems development, and systems acquisition in defense, energy, aviation, space, health & human services, and tax administration. FFRDC is an honorific of distinction, expressing the high scientific achievement of the particular laboratory. Sixteen of DOE's laboratories, each operated as M&O contracts, have been so designated. Ten other agencies have designated the twenty-six other FFRDCs. Said another way, DOE is one of eleven agencies that maintain FFRDCs. DOE's laboratories, in contrast, make up more than thirty-eight (38%) of all FFRDCs.

DOE laboratories continue to perform world-class basic research, e.g., they investigate the fundamental constituents of matter and the forces associated with them. They are leaders in research into the incipient research into nanotechnology and its applications. They lead research into scientific computing to aid in the modeling of complex physical and biological systems and supercomputing. They are leaders in efforts to sequence the human genome with all its potential applications. This recitation is merely representative and by no means comprehensive of the scientific research conducted under DOE's M&O contracts.

DOE's M&O contractors continue to play a critical part in national security, e.g., they have designed and produced every nuclear warhead in the arsenal of the United States and maintain that arsenal. Those contractors play critical roles in the dismantlement, pursuant to treaty obligations, of portions of the United States nuclear arsenal. Those M&O contractors play critical roles in the United States efforts in nonproliferation, international nuclear safety, and efforts to identify weapons of mass destruction. In addition, certain of those contractors are responsible for the design and production of the nuclear engines used by the United States' nuclear submarine fleet. This recitation is only exemplar, not comprehensive.

DOE's M&O form of contract began with contracts for the research underlying, the design, and the production of the atomic bombs that hastened the end of World War II and continues today in contracts for world class basic research and national security. That continuing success speaks to the wisdom and significance of the M&O form of contract to the missions of DOE and its predecessor agencies

2.5 Evolution of the M&O Form of Contract.

2.5.1 Formation of Certain M&O Contracts Subsequent to the AEC. The first M&O contract that ERDA awarded was for the operation of the Solar Energy Research Institute

(SERI)¹⁵ in Golden, Colorado. While the contract was not for one of the traditional purposes of a M&O contract (design and production of nuclear weapons, development of nuclear energy as a source of electricity, or research on the use of nuclear energy in medicine), the indicia of an M&O contract, discussed *infra*, were present in the plan for the management and operation of this facility.

The next use of the M&O form of contract was to manage and operate the Naval Petroleum Reserves (NPRs). These three facilities produced oil nominally for use by the U.S. Navy. The NPR functions were brought into ERDA under ERDA's organization act.¹⁶ A legal opinion was written to consider whether the conversion of these contracts to M&O contracts was an appropriate use of such contracts. The conclusion, concurred in by the Judge Advocate General of the Navy, was that the use of ERDA's M&O form of contract was appropriate.

The Strategic Petroleum Reserve (SPR) was established under one of DOE's predecessor agencies, the Federal Energy Administration.¹⁷ The purpose of the SPR was to create a network of facilities to offload, store, and, if called upon, to disgorge oil to protect against any subsequent interruption in the flow of oil into the United States market. A legal opinion, dated November 1, 1984, determined it appropriate for DOE to use the M&O form of contract for the management and operation of the SPR.

The Nuclear Waste Policy Act¹⁸, enacted in 1982, directed DOE to determine the site, plan, construct, and operate a repository for long-term storage of nuclear waste that results from the operation of civilian reactors across the United States. That charter consisted of many disparate functions, including arranging transport of the waste from the site at which it was generated to the repository site. Following its business model, DOE determined to rely on an M&O form of contract for performance of major portions of its mission.

In the late 1980s, the Department of Energy planned to construct a \$4 billion superconductor, supercollider facility (SCSC), extending the research into the basic components of matter that took place to that point at DOE's Fermi National Laboratory. The SCSC project was to have been orders of magnitude larger than DOE's Fermi National Accelerator Laboratory. After years of planning in the early 1990s, a site was chosen and, upon appropriations, construction begun by a contractor, a consortium of education institutions chosen through an open competition. Consistent with DOE's experience to that point, DOE chose the M&O form of contract. Shortly after construction began, Congress elected to require DOE to terminate the project.

DOE established what is now known as the Thomas Jefferson National Accelerator Facility in 1994. That facility offers users access to world-class scientific facilities to research and perform experiments on the basic structure of nuclear matter. Though the lab is small in size compared to most other DOE national laboratories, DOE awarded an M&O contract because the most efficient performance of the work required a contractor to manage and operate the facility while assuming

¹⁵ DOE has since renamed the facility the National Renewable Energy Laboratory.

¹⁶ Sec. 307 of the Department of Energy Organization Act, Pub.L. 95-91. Subsequently, due to programmatic and statutory changes to the mission of the NPR, these contracts were either concluded or converted to service contracts.

¹⁷ Sec. 154 of the Energy Policy and Conservation Act, Pub.L. 94-163. The transfer into DOE occurred pursuant to § 301 of Department of Energy Organization Act.

¹⁸ Pub.L. 97-425.

responsibility for integration of all functions at the site.

2.5.2 Regulatory Coverage of the M&O Form of Contract. Following the enactment of the amendment of the Office of Federal Procurement Policy Act¹⁹ and during the resulting creation of the Federal Acquisition Regulation (FAR)²⁰, DOE sought and received formal regulatory recognition of the M&O form of contract. Subpart 17.6 of the FAR authorizes agencies with sufficient statutory authority and the need for contracts to manage and operate their facilities to use the M&O form of contract. DOE remains the only agency that has exercised this authority.

The FAR at section 17.601 defines a management and operating contract as “an agreement under which the Government contracts for the operation, maintenance, or support, on its behalf, of a Government-owned or -controlled research, development, special production, or testing establishment wholly or principally devoted to one or more major programs of the contracting Federal agency.”²¹ At section 17.602(a) the FAR requires a written, non-delegable determination by the agency head, where there is sufficient statutory authority, in order to establish and maintain an M&O contract.

Additionally, FAR 17.604 provides a list of basic criteria to be used in identifying a requirement that is appropriate for use of the M&O form of contract. Among the criteria are the use of Government-owned or -controlled facilities, necessity of a special, close relationship with the contractor and the contractor’s personnel in important areas, *e.g.*, safety, security, cost control, site conditions, the performance of the contract is substantially separate from the contractor’s other business, if any, the work is closely related to the agency’s mission and is of a long-term or continuing nature, and for special protection covering the orderly transition of personnel and work in the event of a change in contractors.

FAR 17.603 places certain limitations on the types of functions M&O contractor personnel may perform, *e.g.*, the employees may not supervise or control Government personnel or determine basic Government policies.

Beginning in the late 1980s and continuing today, the GAO and others have criticized the Department for its management of its M&O contracts, in particular for not holding the M&O contractors accountable for their performance. As a result, DOE published an accountability rule intended to hold the contractors liable for negligent acts under the contract.²² DOE also undertook a “contract reform” initiative in 1994 (Making Contracting Work Better and Cost Less) to improve its management of the M&O contract.²³

¹⁹ Pub.L. 93-400, Chap. 7 of Title 41 U.S.C. (2000).

²⁰ 48 C.F.R. Chap. 1(2005).

²¹ At a result of adoption of the FAR with 17.6, the Secretary made determinations about each then existing M&O contract. The Secretary of Energy has made that determination for each of DOE’s current M&O contracts.

²² Published as an interim final rule at 54 FR 5064 (1991), since substantially modified by subsequent rulemakings, though portions remain. The potential liabilities imposed by the rule were in excess of those to which a cost reimbursement contractor would be subjected. In the intervening years, DOE has adopted a clause for use in M&O contracts, subjecting the contractor to loss of all or a portion of its fees for stated failures in performance of the contract.

²³ “Making Contracting Work Better and Cost Less, Report of the Contract Reform Team” (February 1994).

In this time period, DOE also confronted a significant addition to its mission. Certain facilities were no longer needed in the complex that produced nuclear weapons.²⁴ Those facilities and other facilities had substantial contamination that had occurred over decades as part of DOE's weapons complex. While the substantive missions were curtailed or done away with, there was a comparable need to clean the site. Rather than rely on a continuation of the M&O form contract at those locations, DOE chose to experiment with contract strategies tailored to the most efficient and effective resolution of the environmental cleanup. These former M&O contract sites now use various contract forms that to varying degrees retain some but not all of the characteristics of M&O contract.²⁵ Even though the contracts involve Government sites and long term and complex missions, the requirements have been deemed inappropriate for use of M&O form of contracts. In each instance, the requirement is focused on the completion of the clean-up and closure of a site or a portion of a site.

Subsequently, the Department undertook a detailed review of the then existing M&O contracts to determine if the requirements remained appropriate for use of the M&O form of contract. The result of that review was that the M&O list has been reduced from approximately 52 contracts to 29. Among those contracts dropped from the M&O list were many tracing their histories to early in the AEC, *e.g.*, the contract for aviation services connecting Albuquerque to Los Alamos and the Inhalation Toxicology Research Institute.

2.5.3 Other DOE Management Contracts. Over the last three decades the missions at certain nuclear weapon sites and facilities changed or ceased. At these now former M&O contract locations the mission focus shifted to environmental restoration, waste management, and site closure. This shift created a need for a different type of contract and contractor than those DOE traditionally used for management and operating activities.

Notwithstanding this requirement for change, the desire to make expedited progress led predictably to DOE's adoption of contract structures that, while not management and operating contracts, shared some of their characteristics, particularly those related to site and facility stewardship and an overarching emphasis on safety and security. Sometimes described as major site and facility management contracts (sometimes as "other management contracts"²⁶), these contracts involve, to various degrees, the control of the site and a large contractor workforce. Therefore, certain of the provisions appropriate to a management and operating contract are appropriate for these contracts.

2.5.4 Special Contractual Features of DOE's M&O Contracts. In recognition of the circumstances consistent with the establishment of a DOE M&O contract, the terms of the contract differentiate it from typical contracts awarded by other agencies and other contracts awarded by DOE under the FAR. These terms, listed below, are indicia of a "special relationship," the M&O contractors share with DOE:

²⁴ *E.g.*, Rocky Flats, Colorado and Fernald, Ohio.

²⁵ See *infra* subsection 2.5.3., entitled "Other Management Contracts."

²⁶ Paragraph (b) of section 6022 of the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Tsunami Relief Act, 2005, Pub.L. 109-13.

- DOE's involvement in M&O contractor labor relations, *e.g.*, DOE's stewardship of M&O contractor pension and post-retirement medical systems, review of contractor executive compensation, and DOE's authorizing certain M&O contractors to enter into Site Stabilization agreements.
- Laws governing contractor wages and working conditions affect DOE's M&O contractors differently than they affect other Federal contractors. For example, M&Os are not subject to the Service Contract Act;²⁷ however, the M&O contractors must flow down the Act to service subcontracts they award. Generally, DOE prohibits its M&O contractors from performing construction with their own workforces but requires them to apply the Davis-Bacon Act²⁸ to M&O subcontracts for construction.
- DOE's significant involvement in M&O contractor management controls.
- DOE's involvement with the M&O contractor's purchasing process.
- DOE's application of specific DOE directives to the operations of the M&O contractor.
- DOE's authorizing the M&O contractor to finance contract performance by use of Special Financial Institution Accounts, under which checks written by the contractor one day are covered by the Department of Treasury overnight.
- DOE's requiring the M&O contractor to maintain integrated accounting systems, under which the contractors budgeting and accounting follow DOE's Accounting Handbook.
- DOE's relying on the DOE Inspector General for auditing its M&O contractors. DOE requires the M&O contractor to maintain an internal audit function, which performs critical audit functions under DOE's Cooperative Audit Strategy.
- The M&O contractor's reconciling its accounts annually by use of DOE's Statement of Costs Incurred and Claimed.
- The M&O contractor's accepting no work from entities other than DOE, except as specifically allowed by its contract with DOE. DOE assigns program work to the M&O by means of DOE's work authorization system.
- The M&O contractor's operating under certain cost principles designed by DOE for use in its M&O contracts.

2.5.5 Indicia of DOE's Use of the M&O Form of Contract. The Department of Energy has disparate missions, generally involving energy research and development, weapons production and stockpile management, and environmental remediation and restoration. DOE's scientific research and development programs are extensive and include, for example, research in

²⁷ 41 U.S.C. §§ 351 *et seq.* (2000).

²⁸ 40 U.S.C. §§ 3141 *et seq.* (2000).

nuclear energy, high energy physics, the human genome, and naval nuclear propulsion, among other demanding and important areas.

Many of DOE's sites operated and managed by DOE's M&O contracts were placed in locations that at the time were isolated from population centers due to the potential danger and security concerns inherent in the research, design, development, and production of nuclear weapons and other activities. Currently, DOE's M&O contractors have approximately 100,000 employees as compared to DOE's approximately 14,000 employees.

Because of the need to share various types of controlled and sensitive information with its contractors, as well as to ensure that potential conflicts of interest are managed, DOE generally requires that the M&O contractors be subsidiaries of their corporate parents, dedicated to performance at the specific site and supported by performance guarantees from their corporate parents. This limits the ability of the performing contractor to propose on or accept work for other Federal agencies²⁹ or third parties. The contractors' budget processes are integrated into those of the Department, and, in almost all cases, the budgets for DOE's M&O contracts are line items in the Department's budgets. The contractors operate under special financial institution accounts established by DOE under which, for the Government's benefit, contractors incur costs under their contracts. DOE establishes requirements for the contractors' accounting systems.

Aside from the size of these M&O and other major management contracts, they differ from stereotypical contracts awarded by Federal agencies in many ways relevant to small business goaling and achievement. These contractors manage and operate vast sites, consisting of hundreds and often thousands of acres, and they are responsible for all facets of the complex and demanding scientific work DOE assigns to the contractors and for stewardship of the site infrastructure.

Under this statutory contracting model, DOE directs the subject matter areas in which the contractors are focused and the overall performance objectives to be accomplished; however, Congress directed that the contractors be relied upon to apply best management, scientific, and business practices in carrying out that direction. This reliance gave rise to what has become known as a "special relationship," characterized by the use of these contractors to perform major portions of the agency's mission.

DOE's M&O contracts share indicators of that special relationship in their history and in their current operation. Those indicators are evidence of the unique nature of these contracts, bearing directly on why DOE's M&O contracts differ from contracts awarded by all other Federal agencies.

An evaluation of the history of DOE's M&O contracts results in the following commonly recognized indicators for their use.

- Generally, the contractor assumes multi-program scientific and technical responsibilities and work under a broad statement of work.

²⁹ Other than that accepted under DOE's Strategic Partnership Projects program, under which it assigns qualifying work to its M&O contractors under the Economy Act, 31 U.S.C. § 1535 (2000) and sections 31 and 33 of the Atomic Energy Act. See notes 10 and 11, respectively, *supra*, for statutes providing special access to DOE's laboratories for the Department of Homeland Security and the Nuclear Regulatory Commission.

- The requirement is continuing with no foreseeable end.
- The contractor is responsible for integration of scientific and technical and infrastructure functions.
- The contractor performs the substantial portion of scientific and technical responsibilities with its own workforce.
- The contractor's workforce is large, remaining at the site despite change of contractors. This results in the need for DOE to assume stewardship of employee relations and workplace labor conditions.
- DOE oversees security, health, and safety at the site.
- Work takes place at very large, Government-owned reservations and facilities.
- DOE requires the successful offeror to form a corporate entity specifically for and dedicated to the performance of the DOE M&O contract. The contractor may accept work only directly from DOE or as allowed specifically under the M&O contract.
- The contractor must link its accounting system with the Department's, and integrate its budget process with the Department's; usually the budgets for M&O contracts are line items in the Department's budget.