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Report to the Chairman, Subcommittee on Environment, Energy, and Natural Resources, Committee on Government Operations, House of Representatives

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ENERGY MANAGEMENT

DOE Controls Over Contractor Expenditures Need Strengthening

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Resources, Community, and
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The Honorable Mike Synar
Chairman, Subcommittee on
Environment, Energy, and
Natural Resources
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

In response to your May 12, 1986, request, this report discusses three issues relating to the Department of Energy's (DOE's) management controls over operating contractors at several of its government-owned, contractor-operated defense facilities. The issues are that (1) DOE does not adequately stress competition in contracting by its operating contractors, (2) operating contractors need to implement the Anti-Kickback Enforcement Act of 1986, and (3) DOE needs to evaluate operating contractors' payment practices with subcontractors. The report also discusses the payment of certain state taxes by operating contractors, who, in turn, are reimbursed by DOE.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Secretary, Department of Energy, and other interested parties.

This work was performed under the direction of Flora Milans, Associate Director. Other major contributors are listed in appendix II.

Sincerely yours,

J. Dexter Peach

J. Dexter Peach
Assistant Comptroller General

Executive Summary

Purpose

The Department of Energy (DOE) operates an extensive network of production facilities and laboratories producing nuclear weapons for our national defense. It contracts with firms and universities to operate these facilities throughout the country at an annual cost of about $7.3 billion.

Concerned about increased costs of producing nuclear weapons, the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, asked GAO to evaluate how effectively DOE manages its operating contractors' procurement practices. Specifically, GAO evaluated DOE's management controls over its operating contractors' (1) subcontracting activities, (2) procedures to protect against bribes and kickbacks, and (3) payment practices.

In addition, GAO gathered information on the cost to the federal government of the recent trend of states to impose state taxes on DOE's operating contractors.

Background

The U.S. nuclear weapons program began during World War II. Because of the wartime environment, urgency was placed on developing nuclear weapons; DOE adopted a philosophy of "least interference" for its nuclear weapons operating contractors, giving them considerable independence in subcontracting and payment practices. Although this urgency has since decreased, DOE continues to maintain this philosophy because, according to DOE officials, they have contracted for the management experience and technical expertise of these contractors, including their corporate procurement and payment practices.

DOE's defense contractors use facilities and land owned by the federal government; all their procurements become federal property; and program direction and funding come from the government. However, contractors remain private enterprises and are thus not legally bound by the same procurement laws that govern federal agencies.

Results in Brief

Based on its historical philosophy of least interference, DOE exercises little control over its operating contractors' procurement activities. As a result, DOE has little assurance that its contractors (1) are adequately stressing competition in subcontracting; (2) are reasonably protected against the occurrence of kickbacks; and (3) are following federal payment procedures.

New Mexico currently assesses one of DOE's operating contractors about $34 million annually in certain taxes from which the federal government itself would be exempt. The cost to the federal government could grow to hundreds of millions of dollars a year if other states follow New Mexico's practice.

Principal Findings

Contractors Do Not Adequately Stress Subcontract Competition

Because of its least-interference management approach, DOE has (1) not established for its contractors a common definition of competition; (2) waived its own requirement that contractors publish procurement notices for proposed contracts over $100,000; and (3) not regularly reviewed contractors' procurements in two categories that it exempted from competition. DOE also provides no specific procedures for contractors to follow, such as conducting and documenting thorough market searches for potential competitors. Thus, DOE has little assurance that its contractors procure items fairly and at the lowest possible cost.

The Competition in Contracting Act requires that federal executive agencies permit all responsible sources to compete for contracts. For procurements over $25,000, the act requires that a federal executive agency publish a notice in the Commerce Business Daily to notify potential sources of its intent to purchase goods or services. DOE's acquisition regulation for awards of subcontracts by its operating contractors, in contrast, requires publication of notices only for proposed procurements of $100,000 or more. DOE, however, waived this requirement for the five operating contractors GAO reviewed, saying that the requirement would place undue administrative burdens on the contractors. Yet, following the publication requirements would have involved only about one half of one percent to 1.8 percent of the contractors' 1985 actions, while covering 50 percent and 60 percent, respectively, of their procurement dollars. Moreover, DOE has not conducted any studies to determine the administrative cost to the contractor of the publication requirement.

In the absence of a publication requirement, the five contractors had published few procurement notices. For example, of 5,257 procurements over $25,000 made by 2 contractors in fiscal year 1985, only 17 were preceded by a notice in the Commerce Business Daily. The contractors believed that their market search efforts to identify potential sources

were adequate. These searches, however, were generally limited, poorly documented, or in some cases not done at all.

Operating Contractors Must Implement the 1986 Anti-Kickback Act

The Anti-Kickback Enforcement Act of 1986 requires federal agencies, including DOE, to assure that its operating contractors have procedures designed to reduce their vulnerability to kickbacks when awarding subcontracts. Because of the recency of the legislation and its desire to await the promulgation of overall federal regulations, DOE has yet to take such action. The act also provides significant criminal and civil penalties for violations. A recent FBI investigation at DOE's Savannah River Plant showed that kickbacks exist within DOE's contractor network. The investigation, still ongoing, has already resulted in several contractor and subcontractor officials' convictions on charges of conspiracy and bribery.

The five operating contractors were exercising some precautions against kickbacks, but some protective procedures, such as rotating buyers periodically and establishing fraud hotlines, were not in place.

Contractors Not Required to Follow Federal Payment Procedures

The Prompt Payment Act requires federal agencies to pay their bills on time and to pay interest penalties on any payments that are more than 15 days late. Consistent with its least-interference philosophy, DOE does not require its operating contractors to include payment clauses in their contracts that reflect normal federal procedures. Also, DOE does not regularly review its contractors' payment practices. The five contractors generally paid their subcontractors on time, but did not pay interest penalties on late payments. In contrast, one contractor had made early payments which resulted in earlier than necessary government expenditures, causing the incurrence of unnecessary interest expenses of about $512,000 in fiscal year 1985.

Contractors Pay Millions in State Taxes

Because operating contractors are not designated as federal agents, they are subject to various state taxes from which federal agencies are exempt. New Mexico will assess the Sandia Corporation nearly $34 million in such taxes in fiscal year 1987; this 5-year contract between DOE and Sandia will be taxed about $100 million, which will be paid ultimately by the federal government. At the time of GAO's review, at least three other states had either imposed taxes similar to New Mexico's or were considering doing so. Such state levies would subject DOE to paying hundreds of millions of dollars in state taxes. The Supreme Court, in a

decision requiring Sandia to pay taxes to New Mexico, has observed that the Congress is the appropriate entity to resolve such complex issues.

Matter for Congressional Consideration

In view of congressional concern about the national debt and the need to reduce federal expenditures, the Congress may wish to consider exempting federal agencies' operating contractors from state taxes.

Recommendations

GAO recommends, among other actions, that the Secretary of Energy assure that DOE's defense-related operating contractors stress competition by establishing a common definition of competition and requiring greater use of competitive procedures, including publishing notices in the Commerce Business Daily. More detailed recommendations concerning competition are found in chapter 2.

In addition, GAO recommends that the Secretary (1) incorporate uniform, minimum procedures, consistent with the government-wide procedures being developed by the General Services Administration, to reduce vulnerability to kickbacks in DOE's operating contracts and (2) assure that contractors' payment practices are consistent with federal requirements.

Agency Comments

GAO discussed the findings in this report with officials at DOE headquarters and operations offices and with contractor officials Their comments have been incorporated where appropriate. As requested, however, GAO did not obtain official agency comments on this report.

Contents

Abbreviations

DOE	Department of Energy
EG&G	Edgerton, Germeshausen and Grier, Inc.
FBI	Federal Bureau of Investigation
GAO	General Accounting Office

Introduction

To produce nuclear weapons for our national defense, the Department of Energy (DOE) manages an extensive network of production plants and laboratories. DOE contracts with private firms and universities to operate these facilities at an annual cost of about $7.3 billion. In carrying out their responsibilities, these private firms and universities (the operating contractors) spend about $3.4 billion a year in subcontracts—about 47 percent of the total $7.3 billion.

Evolution of the Nuclear Weapons Program

Conceived under emergency conditions at the height of World War II, the U.S. nuclear weapons program was marked by a great sense of urgency and unknown risks. Scientists, engineers, and technicians collaborated in utmost secrecy to achieve the program's objective: to produce the world's first atom bomb before the enemy did, regardless of cost. They succeeded, directed by the U.S. Army's Manhattan Engineer District, DOE's distant predecessor, and supported by a consortium of industrial and university assets.

The post-World War II era saw a continuing need for the nuclear weapons program, with the advent of the Cold War, the Korean War, and then the Vietnam conflict. The program's success continued as well, with the nuclear weapons complex consistently meeting the nation's need for defense-related nuclear research and weapons production. Over the past four decades, the nuclear weapons complex has evolved from the first facility established in 1943 at Los Alamos, New Mexico, to today's nationwide network of 17 laboratories and plants that research, design, produce, and test nuclear weapons.

The Program Today

The objective of the current DOE nuclear weapons program is to meet the work load requirements established by the annual Nuclear Weapons Stockpile Memorandum, which the Department of Defense and DOE jointly prepare for the President's approval. The nuclear weapons program is directed by DOE's Office of Military Application, under the Assistant Secretary for Defense Programs. This office works primarily through DOE's Albuquerque and Nevada Operations Offices, with assistance from operations offices in Chicago, Illinois; Oak Ridge, Tennessee; Richland, Washington; San Francisco, California; and Savannah River, South Carolina.

Today's nuclear weapons program is carried out through a nationwide network of facilities which are government-owned and contractor-operated. These facilities together employ about 60,000 people, most of

whom (about 57,000) are employees of the operating contractors; the rest are government employees. Also involved, although not directly employed, are hundreds of subcontractors who handle about $3.4 billion in subcontracts.

DOE's contracts with its operating contractors are fully reimbursable, cost-type contracts (i.e., contractors receive full reimbursement from DOE for all costs incurred). Appendix I describes the dates and types of contracts between DOE and its operating contractors.

Program Functions

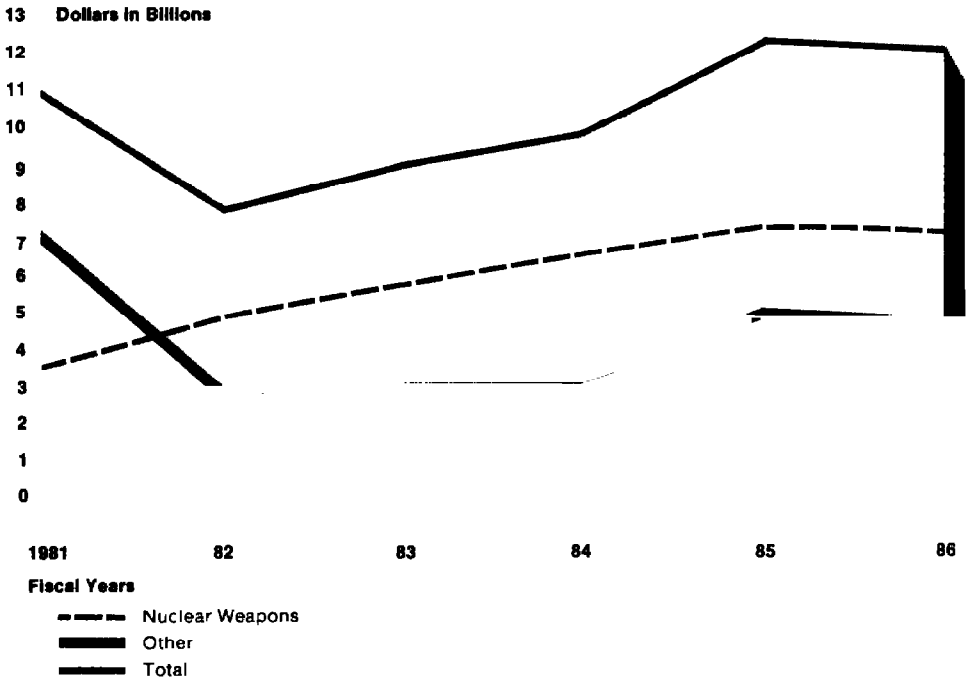
The 17 facilities comprising the nuclear weapons complex perform three major groups of activities: weapons research, development, and testing; weapons production; and nuclear materials production. (Appendix I describes the various functions of each facility.) Nuclear weapons research, development, and testing activities, overseen by DOE's Office of Military Application, are primarily carried out by the three weapons laboratories—Los Alamos National Scientific Laboratory in Los Alamos, New Mexico; Lawrence Livermore National Laboratory in Livermore, California; and Sandia National Laboratories in Albuquerque, New Mexico. The Nevada Test Site near Las Vegas, Nevada also conducts nuclear weapons research, development, and testing. Weapons production activities, overseen by DOE's Albuquerque Operations Office, are conducted at the seven DOE production plants: Rocky Flats, near Denver, Colorado; Kansas City, in Kansas City, Missouri; Pinellas, near St. Petersburg, Florida; Pantex, near Amarillo, Texas; Mound, near Miamisburg, Ohio; Y-12, in Oak Ridge, Tennessee; and Savannah River, in Aiken, South Carolina. Nuclear materials production activities, overseen by both the DOE Office of Nuclear Materials Production and the DOE Office of Uranium Resources and Enrichment, are carried out by six sites: the Hanford Site, in southeastern Washington State; the Feed Materials Production Center, in Fernald, Ohio; the Idaho Chemical Processing Plant, near Idaho Falls, Idaho; and three gaseous diffusion plants at Oak Ridge, Tennessee (currently inactive); Paducah, Kentucky; and Portsmouth, Ohio. The Savannah River and Y-12 plants also share some materials production activities.

Program Funding

DOE's nuclear weapons budget has grown extensively in recent years, as illustrated by figure 1.1. From fiscal year 1981 to fiscal year 1986, the budget grew by about 100 percent—from $3.7 billion to $7.3 billion. Similarly, the portion of the total DOE budget allocated to the nuclear

weapons program nearly doubled during the same period, from about 34 percent to about 60 percent.

Figure 1.1: DOE Appropriation by Fiscal Year



Source Annual DOE Budget Authority

Objectives, Scope, and Methodology

On October 29, 1985, the Chairman, Subcommittee on Environment, Energy, and Natural Resources, House Committee on Government Operations, asked us to evaluate the effectiveness of DOE's management controls over its operating contractors. As a result of this request and subsequent meetings with the Chairman's staff, we concentrated our review on DOE's control over the procurement functions of its nuclear weapons-related operating contractors, with an emphasis on competition and payment practices. Specifically, our objectives were to evaluate DOE controls and procedures governing its operating contractors'

- subcontracting practices;
- procedures to protect against bribes and kickbacks; and
- payment practices.

In addition, after discussion with the requester, we included another review objective: to provide information on the feasibility of a legislative exemption of operating contractors from certain state taxes.

We conducted our review from October 1985 through March 1987 at (1) DOE headquarters and three operations offices (Albuquerque, Oak Ridge, and Savannah River); (2) the Los Alamos and Sandia laboratories, which are operated by the University of California and Sandia Corporation, respectively; (3) the Kansas City and Savannah River production plants, which are operated by Bendix Corporation and Du Pont Corporation, respectively; and (4) the procurement facilities at Oak Ridge, which cover the Y-12 and Paducah plants operated by Martin Marietta Corporation.

To evaluate DOE controls over its defense-related operating contractors' competitive procedures, we interviewed DOE and operating contractor procurement officials about their efforts to obtain competition on subcontracts. We reviewed the DOE contracts with each of the five operating contractors included in our review to identify provisions related specifically to obtaining competition among subcontractors. We also reviewed operating contractors' competitive procurement policies and procedures and compared them with federal policies and procedures. We reviewed previous GAO decisions to determine the applicability of federal procurement requirements to the operating contractors. We reviewed federal procurement policy statements, laws, and regulations including the Competition in Contracting Act of 1984, the Federal Acquisition Regulation that implements the act, and the DOE Acquisition Regulation that further implements the act within DOE and with its contractors. We obtained information from each of the operating contractors showing the level of competition achieved using the contractors' definitions of competition. We reviewed DOE Inspector General reports and DOE reports on reviews of contractor procurement systems, as well as operating contractors' internal audit reports on procurement activities and procedures.

At the five operating contractors' locations we visited, we judgmentally selected and reviewed a total of 57 competitive and noncompetitive contracts exceeding $25,000 (including 31 that exceeded $100,000) made during fiscal years 1985 and 1986. At three of the locations, we also judgmentally selected and reviewed 40 procurement actions from two procurement categories that are exempted from competition by the contractors under DOE authority (see Ch. 2). We did not select a statistically valid sample because the time and cost involved would have been prohibitive; therefore, our results cannot be considered representative of all

market search and documentation activities. However, the contracts we reviewed did represent the types of procurements made by the operating contractors, thereby enabling us to evaluate their controls and procedures.

To evaluate DOE's controls over contractors' procedures to protect against bribes and kickbacks, we interviewed contractor officials and examined their anti-kickback controls and plans. We also reviewed congressional testimony on anti-kickback controls and interviewed staff members of the Senate Subcommittee on Oversight of Government Management, Governmental Affairs Committee, which was instrumental in drafting the Anti-Kickback Enforcement Act of 1986. We reviewed the act but did not assess the degree of contractor compliance with the act because it had not been enacted until November 1986, after completion of most of our field work.

To evaluate DOE's controls over contractors' payment practices, we reviewed provisions of the Prompt Payment Act of 1982 and compared them with payment provisions specified in DOE's contracts with the operating contractors. We interviewed operating contractor officials and reviewed their payment policies, procedures, and practices. We examined DOE reviews and internal audit reports for any references to payment practices by the operating contractors.

To determine the cost savings to the federal government if operating contractors were granted congressional exemption from certain state taxes, we reviewed a Supreme Court decision regarding taxes paid to the State of New Mexico by the Sandia Corporation (United States v. New Mexico, 455 U.S. 720 (1982)). New Mexico was the first state to impose taxes on a DOE operating contractor; however, several other states have taken similar action or are planning to do so. The taxes paid by the operating contractors are an allowable cost and are contractually reimbursable by DOE. We interviewed DOE and operating contractor officials to identify what types of taxes they pay the various states in which the operating contractors operate. We also obtained, from the General Services Administration, information to show the extent of other government-owned and contractor-operated facilities that could have similar tax implications.

We discussed our findings with agency program officials and included their comments where appropriate. However, in accordance with the requester's wishes, we did not obtain the views of agency officials on our conclusions and recommendations, nor did we request official

agency comments on a draft of this report. We performed our review in accordance with generally accepted government auditing standards.

DOE Does Not Adequately Stress Competition in Subcontracting in Its Weapons Program

Throughout the history of the weapons program, DOE has emphasized performance over cost. This emphasis may have been necessary in the program's developmental stage during World War II, when time was considered more important than money; now, however, more than 40 years after the war, the goals and urgency of the program are no longer the same. As a result, DOE has an opportunity to increase its assurance that costs are reasonable through increased competition and still maintain a strong weapons capability.

Concerned with the need to limit unnecessary sole-source awards and increase competition in government contracting, the Congress enacted legislation reaffirming and strengthening prior legislation, by requiring federal executive agencies to achieve "full and open" competition on their procurements (with certain exceptions necessitated by national security, urgency of need, etc.).[1] Full and open competition means that all responsible sources are permitted to compete on the procurement. The law reflects the Congress' intent that the procurement process should be open to all capable contractors who want to do business with the government. According to the competition act, federal executive agencies are to assure that contract awards over $25,000 are based on full and open competition whenever appropriate through use of competitive procedures. This includes publishing notices in the Commerce Business Daily of the intent to procure goods or services, and thereby assuring that all responsible sources are permitted to compete.[2]

The statutory requirements for assuring competition do not apply to the award of subcontracts by DOE's operating contractors. In our role in deciding bid protests, we have held that because the contractors operate a federal facility and are 100-percent federally funded, they are acting on behalf of the federal government when they award subcontracts and that they should therefore follow the "federal norm" in their subcontracting activities. The federal norm is defined as the general basic principles which govern the award of contracts by the federal government. However, the federal norm cannot be equated with, and DOE does not prescribe, with the exception of one requirement which it has waived, any specific procedures for subcontract competition in its contracts with operating contractors.

[1]The Competition in Contracting Act of 1984, as amended.

[2]The Department of Commerce publishes the Commerce Business Daily, a daily list of U.S. government procurement invitations, contract awards, subcontracting leads, sales of surplus property, and foreign business opportunities, Monday through Friday

DOE could, by contract or regulation, establish specific competitive requirements for the award of subcontracts by its operating contractors, more closely corresponding to those governing federal procurements than is now the case. Instead, DOE has opted to maintain a philosophy of "least interference" in contractor activities. According to DOE officials, this philosophy stems from the unique relationship between DOE and its operating contractors that began during World War II. DOE contracts for the management experience and technical expertise of these contractors, including their corporate procurement and payment procedures. DOE continues to maintain this philosophy, and as a result, does not require its contractors to follow federal procurement and payment laws, nor, with limited exceptions, does it otherwise prescribe any specific competitive requirements. Further, in the spirit of its least-interference philosophy, DOE policy and DOE contracting officers allow the operating contractors to exempt from competition two categories of procurements and to obtain competition on other procurements only when the contractors believe it necessary.

If DOE applied to its operating contractors the requirements that apply to federal executive agencies for publishing notices in the Commerce Business Daily when proposed procurements exceed $25,000, less than 2 percent of the contractors' procurements would be affected; this would cover about 61 percent of the procurement dollars.[3] Even if DOE had not waived its own less stringent requirement that contractors publish notices for procurements over $100,000, one half of 1 percent of the contractors' procurements would have been affected while 50 percent of their procurement dollars would have been covered.[4]

Although DOE currently requires its contractors to obtain competition and to submit regular reports on the amount of their competitive contracting, DOE has

- not established a common definition of competition for its contractors,
- waived its own requirement for contractors to follow in publishing procurement notices, and
- not regularly reviewed contractors' procurements from among two categories of items that are exempt from competition.

[3]For proposed contracts other than sole-source contracts, this threshold was changed from $10,000 for all executive agencies by the fiscal year 1987 Defense Authorization Act, Public Law 99-661, enacted on November 14, 1986.

[4]For each of the five operating contractors we visited, DOE issued a waiver of its DOE Acquisition Regulation requirement that proposed procurements of $100,000, or more, be published in the Commerce Business Daily.

As a result, DOE does not know whether its operating contractors are assuring subcontract competition, which is needed to ensure that goods and services are obtained at the most reasonable prices.

Benefits of Competition

The benefits derived from competition are well recognized. According to the Secretary of Defense, competition serves to reduce cost, improve quality, and enhance the industrial base that is so critical to defense mobilization. Department of Defense and DOE Inspector General reports have demonstrated these principles. For example, a January 24, 1986, DOE Inspector General report identified a case in which inadequate competition resulted in excessive costs to the government. At Savannah River, the contractor made 39 purchases of aluminum plugs (for casings that hold nuclear fuel) for $4.6 million. The plugs were purchased noncompetitively or with limited competition from January 1983 to June 1985. According to the report, the contractor could have saved about $1.6 million by purchasing the plugs competitively.

The objective of achieving potential price savings is all the more important because of the type of contract DOE has with its operating contractors. From the inception of the nuclear weapons program, DOE has emphasized performance over cost, primarily due to the urgent nature of the program. DOE's contracts with its operating contractors are cost-reimbursement type contracts, which do not provide the contractor with any incentive to cut costs. Awarding subcontracts competitively, on the other hand, even in conjunction with cost-type prime contracts, helps to ensure that government contractors pay fair and reasonable prices.

DOE Lacks a Common Definition of Competition

DOE, in accordance with its least-interference philosophy, has not established a uniform definition of competition; as a consequence, the operating contractors define competition differently. DOE does not make clear what it expects contractors to accomplish, does not emphasize the importance of competition, and limits its own ability to perform its oversight and management role. This lack of a uniform definition makes it impossible for DOE managers and auditors to assess or compare the adequacy of operating contractors' subcontracting activities.

Federal law specifies certain procedures that federal executive agencies must follow to achieve "full and open" competition. DOE regulations governing contractor operations and contract provisions, on the other hand, include vague and general competitive requirements. For example, the DOE Acquisition Regulation, as well as most of DOE's contracts, states

that operating contractors "should maximize competition" and "achieve competition consistent with the objectives of the contracts." Federal procurement law, by contrast, (1) states that "full and open" competition is achieved by permitting all responsible sources to compete on the procurement and (2) requires the publishing of notices in the Commerce Business Daily for all procurements over $25,000, with certain exceptions (e g., unusual and compelling urgency, threats to national security, etc.).

Lacking a uniform DOE definition, operating contractors define competition in different ways, making it difficult for DOE to evaluate or compare contractors' competitive achievements. For example, one contractor defines full competition as "three bidders for contracts under $10,000" and "six bidders for contracts over $10,000." Another contractor defines it as "two or more bidders, with the award usually going to the low bidder." Still another contractor defines competition as "more than two bidders;" if the contractor gets only two bids, he defines this as "negotiated competition." Thus, if a contract were awarded based on two bidders, the first contractor would report it to DOE as a noncompetitive contract, the second as a fully competitive contract, and the third as a negotiated competitive contract. Because of these differences in definitions, and the resulting differences in reports on competition, DOE cannot measure the degree of competition achieved.

DOE Waived Its Own Requirements for Contractors to Publish Procurement Notices

Whereas federal statutes require executive agencies to publish notices in the Commerce Business Daily for all proposed procurements over $25,000 (with certain exceptions), DOE policy requires its operating contractors to publish notices in the Daily of all proposed procurement actions of $100,000 or more to expand participation by small and small disadvantaged businesses. In May 1987 a DOE headquarters procurement policy official stated that DOE, consistent with its least-interference philosophy, is considering eliminating this publication requirement entirely.

The publication requirement was established in 1977 by the Energy Research and Development Administration (a DOE predecessor). According to DOE officials, the $100,000 requirement was to serve primarily as a means of reducing the administrative burden of its prime contractors. Not only does this DOE policy make it easy to avoid competition for procurements under $100,000, it also authorizes the contracting officer to waive the notice requirement. For all five of the operating contractors we visited, the contracting officers had issued a blanket waiver of the notice requirement, allowing the contractors to publish notices only

when they believed it necessary. According to DOE officials, such waivers were in keeping with their least interference philosophy.

With this latitude, the operating contractors had published few notices of procurement actions. For example, Sandia officials estimated that they had published notices in the Commerce Business Daily for only 7 out of 3,431 fiscal year 1985 procurement actions above $25,000. Similarly, Los Alamos Laboratory officials estimated that they had published notices for only 10 out of 1,826 procurement actions above $25,000 in 1985. Out of the 57 procurements over $25,000 that we reviewed at the five operating contractor locations, none had notices published in the Daily (not even the 31 that were over $100,000). Operating contractor officials maintained that they did not need to publish notices in the Daily because their market searches—attempts to determine whether qualified sources capable of satisfying the government's requirement exist—were adequate without such notices. However, the contractors' market searches either were not done, were limited, or were inadequately documented. Thus, in some cases, the procedures used by DOE's prime contractors did not assure competition in accordance with the principles of the "federal norm."

Collectively, the five operating contractors had over 450,000 procurement actions in fiscal year 1985 at a cost of over $2 billion. Of those actions, 9,766 exceeded $25,000 (at a cost of $1.51 billion), and 2,595 exceeded $100,000 (at a cost of $1.15 billion). For our review, we selected 28 contracts that the contractors considered to be competitive and 29 contracts they considered to be noncompetitive.

Publication Requirements Would Affect Few Procurement Actions but Substantial Funds

If DOE had required its defense-related operating contractors to adhere to the notice requirement mandated by the Congress for federal agencies (i.e., publish a notice of all proposed procurements of $25,000 or more in the Commerce Business Daily, with certain exceptions), it would have affected a maximum of 13,800 (less than 2 percent) of all the contractors' fiscal year 1985 procurement actions, but would have involved about 61 percent of their procurement dollars. Even if DOE had required contractors' adherence to its own less stringent policy of publishing notices for procurements over $100,000, the effect would have been similar. This less stringent requirement would have pertained to a maximum of about 3,800 (one half of 1 percent) of all the operating contractors' procurement actions, but would have involved about 50 percent of their procurement dollars. In either case, the percentages of procurements affected and dollars involved could drop even lower at

any given contractor location, depending on the number of procurements that qualified for any of the exceptions to publishing notices as specified in the law and implementing regulations.

Table 2.1 shows, for the 16 defense-related DOE facilities, how many fiscal year 1985 procurement actions and dollars were over $25,000 and how many were over $100,000. The number of fiscal year 1985 procurement actions above $25,000 ranged from 682, or 0.6 percent, at the Y-12 and Paducah plants to 3,431, or 3.1 percent, at Sandia. For actions above $100,000, the range was from 19, or 0.2 percent, at Fernald to 937, or 0.8 percent, at Sandia.

Table 2.1: DOE Operating Contractor Procurements for Fiscal Year 1985

Operating contractor facility[a]	Total no. of actions	Total dollars (millions)	Above $25,000				Above $100,000			
			No. of actions	%	Dollars (millions)	%	No. of actions	%	Dollars (millions)	%
Sandia	111,211	$627	3,431	3.1	$480	76.6	937	0 8	$363	57 9
Los Alamos	66,294	425	1,826	2 8	329	77 4	407	0.6	259	60 9
L. Livermore	74,672	424	1,675	2 2	264	62 3	387	0 5	204	48 1
Rocky Flats	58,412	150	644	1 1	92	61.3	219	0 4	71	47 3
Pinellas	13,152	49	318	2 4	29	59 2	73	0.6	17	34 7
Pantex	15,290	33	195	1 3	24	72.7	59	0 4	19	57 6
Mound	30,569	80	332	1 1	47	58 8	105	0 3	36	45.0
Kansas City	54,106	229	1,137	2.1	172	75 1	288	0 5	115	50.2
Y-12/Paducah[b]	120,964	358	682	0.6	91	25.4	204	0.2	73	20 4
Savannah R.	100,012	675	2,690	2 7	437	64 7	759	0.8	345	51 1
Hanford	46,254	89	492	1 1	60	67.4	113	0 2	42	47 2
Portsmouth	14,311	23	152	1.1	18	78 3	35	0 2	12	52.2
Fernald	8,989	23	115	1.3	11	47 8	19	0 2	7	30 4
Idaho Falls	2,625	12	78	3 0	9	75 0	18	0 7	6	50.0
Weapons Test	42,714	203	[c]		[c]		221	0 5	131	64 5
Totals	**759,575**	**$3,400**	**13,767**	**1.8**	**$2,063**	**60.7**	**3,844**	**0.5**	**$1,700**	**50.0**

Source: DOE and contractor data

[a]The Oak Ridge Gaseous Diffusion Plant, as described in appendix I, is inactive.

[b]Martin Marietta is the contractor for both Y-12 and Paducah facilities.

[c]Information not available.

Administrative Costs of Publishing Requirement Are Unknown

DOE officials said that strict application of a publishing requirement would be too burdensome on the operating contractors because of the excessive paperwork and associated costs it would entail. In this regard, federal procurement law and regulations generally require

- issuing a solicitation at least 15 days after notice is published in the Commerce Business Daily;
- allowing at least 30 days after the solicitation is published before bids or proposals must be submitted; and
- stating in the notice that all responsible sources may submit a bid, proposal, or quotation to be considered.

DOE officials could not estimate the administrative costs of publishing notices for procurements. They indicated, however, that such notices may increase the number of requests to DOE contractors for solicitations and that the contractors might be swamped by proposals, some of which might not be able to satisfy the requirement. In this regard, GAO has held that, in the case of federal agencies, the burden of additional administrative costs is not a valid argument against issuing solicitations:

"... Even where the contracting officer perceives little or no willingness in the market to supply competitive offers or bids, the administrative costs of preparing and issuing a solicitation are outweighed by the potential costs of losing bidders' confidence in the competitive system."[5]

Because DOE's nuclear weapons prime contractors are operating on behalf of the federal government, we believe that the principles of this decision are also appropriate guidance for them, even in situations where the solicitations might result in some unresponsive proposals.

Market Searches Were Limited, Nonexistent, or Poorly Documented

Most of the operating contractors believed that they did not need to publish notices; instead, they believed that their own market searches, in the absence of Commerce Business Daily notices, gave them an ample indicator of the number of potential competitors. For example, contractors said that by attending trade fairs, reading trade journals, and contacting local distributors, they were well aware of all potential bidders.

However, the five operating contractors generally conducted limited searches and sometimes conducted no search at all. In addition, the files we reviewed generally contained sparse documentation of contractors'

[5]Olivetti Corporation of America, B-187369, February 28, 1977, 77-1 CPD 146.

search efforts. Because DOE does not require contractors to conduct and document market searches, it cannot effectively evaluate its contractors' efforts to obtain competition.

In many cases, contractors had done no market searches for procurements. At Savannah River, for example, the contractor had not conducted a market search for 10 of the 15 procurements we reviewed. In one case (a $131,000 sole-source procurement of furniture moving services), the buyer said he made no attempt to conduct a market search for these services because earlier vendors had damaged walls and floors. Yet the local telephone directory contained listings for over 20 furniture movers, including local and national firms. At Kansas City, the contractor had not conducted market searches for 3 of 10 procurements we reviewed. Similarly, at the Y-12 and Paducah facilities, the contractor had not conducted searches for 7 of the 20 procurements we reviewed.

In other cases, market search efforts were too limited. In one market search, for example, the Sandia contractor had contacted only Albuquerque area vendors because the contract requirements called for a local office. This $4.3 million competitive contract was to procure integrated logistics support (e.g., planning and providing for production, training, maintenance, provisioning, and spare parts) for a Marine Corps program. The contract required a local office because the work demanded close daily interaction with contractor personnel. When asked whether other sources outside the Albuquerque area might have been willing to establish a local office in order to meet the contract requirements, the contracting representative admitted that this was a possibility. He said that he had since learned of at least two sources outside the local area that could have competed for this work.

Similarly, the Oak Ridge contractor conducted limited market searches for four procurements totaling about $386,000 (for construction, modification, or renovation services). The contractor's search efforts consisted of sending notices to numerous post offices for posting on bulletin boards. However, it did not publish notices in local newspapers or trade journals.

In numerous cases market search efforts had not been adequately documented. For example, Sandia's file documentation for a $174,000 noncompetitive procurement of four computer stations and software noted that an extensive market search had been done. However, the file did not include any support for that notation or for the conclusion that the

selected vendor's capability exceeded that of all other suppliers surveyed. Although a notation indicated that the vendor was the only source that could meet Sandia's needs, neither the specific needs nor their uniqueness were explained in the file.

In another case, a Los Alamos contract file stated that a market survey of "all the manufacturers in the world" had been conducted for a $440,000 noncompetitive procurement of an ion accelerator. No supporting details were included in the file, however, to indicate how the market survey had been conducted or who had conducted it. At Savannah River, similarly, a contract file contained a note stating that the recommended vendor was the only source that could both provide about 7,000 pounds of a unique aluminum alloy costing about $14,000 and meet the required delivery schedule. However, the file did not contain any information showing what actions had been taken to locate other sources or explaining why the recommended vendor was the only source capable of providing the product.

Regular Review of Exempted Procurements Is Lacking

DOE has not maintained adequate oversight of the operating contractors' use of two categories of procurements. Almost all of these procurements are exempted from the minimal competition the contracts require, consistent with DOE's least-interference philosophy. Because these procurements are exempted, DOE does not review them during its scheduled contractor procurement system reviews.[b] A DOE headquarters review and a Sandia internal audit report noted the potential for abuse of these procurement categories, given the lack of DOE oversight.

The first category of exempted procurements is made up of weapons parts and materials which DOE design laboratories, such as Sandia, specify must be purchased from a particular source or sources. These parts and materials, referred to as "B-items," are listed along with their sources, and the list is distributed for use by DOE's production plants. The second category is comprised of items purchased from among DOE's integrated contractors—its network of defense-related operating contractors.

[b]DOE uses contractor procurement system reviews as the primary way to control the placement of subcontracts by operating contractors. DOE performs such reviews about once every 3 years at any given contractor facility

B-Item Procurements Are Not Reviewed

Without regular review of B-item procurements, DOE cannot assure that B-items' noncompetitive status is warranted or that undue reliance on a single source is prevented. DOE approval is not required before a B-item or a source for a B-item is added to the list, where it may remain indefinitely. A 1980 DOE internal review noted the potential for abuse that can result from this lack of DOE oversight: A source could be wrongly selected or weapons material could be inappropriately designated as a B-item. Abuse of the B-item list could lead to excessive prices and, ultimately, could weaken the industrial base by limiting contractors who provide critical goods and service.

The number of B-items on the list has increased from 369 items in 1966 to 1,940 items in 1985. Some items have been on the list for as long as 18 years. Ninety-three percent of the items on the list must be procured from only one source. Production plant procurements of B-items amounted to about $88 million in fiscal year 1985. At the Kansas City plant, B-items accounted for about $70 million, or about 31 percent, of total Kansas City fiscal year 1985 procurements.

DOE authorizes the Sandia and Lawrence Livermore Laboratories to designate that certain weapons materials be purchased only from specified sources. Circumstances that may justify designation of limited B-item sources include the following:

- Only one or a few potential suppliers have the knowledge and skill to build the desired quality into the required quantity of an item by the time a production order must be placed for the item.
- Volume may be so small that it is not economical to develop other suppliers due to the cost of obtaining security clearances for facilities, production tooling, and personnel training.

DOE requires that such justifications be documented but provides no criteria on what details or support should be included in the documentation. Further, once an item is designated a B-item and exempted from competition, it is no longer subject to DOE review during contractor procurement system reviews.

Many B-items are available only from subsidiaries of two DOE operating contractors: Bendix Corporation and Edgerton, Germeshausen and Grier, Inc. (EG&G). Specifically, 252 of 1,940 items are available only

from a Bendix subsidiary, and 23 are available only from an EG&G subsidiary. Of the 21 B-item procurements we reviewed at Sandia and Kansas City, we found that the production plants have only one source for 20 of them.

A 1980 DOE headquarters review of the Albuquerque Operations Office noted a potential for abuse of the B-item program due to lack of management review. It noted that the system of establishing a particular contractor as the designated source for weapons material has the potential for abuse, without management visibility and control. Without appropriate checks and balances, a particular source could be wrongly selected or some weapons material inappropriately designated a B-item.

Similar concerns were expressed in 1986 by Albuquerque Operations Office officials, who said that the lack of management control and visibility has led to abuse of the B-item list (i.e., unnecessary restriction of competition). According to these officials, they are presently working on procedures and policies to strengthen management controls over the B-item list. However, the details of this effort had not been developed at the time of our review.

Integrated Contractor Orders Are Not Reviewed

Just as DOE does not regularly review B-item procurements, it does not regularly review noncompetitive procurements made from among its network of operating contractors. These procurements, referred to as integrated contractor orders, can limit competition, in that some goods or services may be purchased noncompetitively that are readily available competitively on the commercial market. Authorized by DOE policy, an integrated contractor order is defined as an assignment of work and/or a transfer of government property between integrated contractors. DOE, according to officials of one contractor, uses such orders because they help maintain contractor expertise and because they are provided at cost. In our opinion, this does not necessarily mean such orders are the least costly alternative because the contractors do not conduct price analyses of the orders.

In fiscal year 1985, procurements through integrated contractor orders occurred at three of the five contractor sites visited. These amounted to about $11 million at Kansas City, about $20 million at Los Alamos, and about $87 million at Sandia. Based on our review of 19 orders—4 at Kansas City, 4 at Los Alamos, and 11 at Sandia—we have some concern about the Sandia orders. While Kansas City and Los Alamos orders were

generally well-documented and justified, Sandia orders were not adequately documented and contained very general statements of work. For example, Sandia's files did not contain a rationale for placing the orders with integrated contractors on a noncompetitive basis. An example of a general work statement was contained in an order for $50,000 to provide "maintenance support" at five Air Force Tactical Air Command areas for a "perimeter intrusion detection system," with no further details.

Additional concerns about Sandia's integrated contractor orders were expressed in a 1986 Sandia internal audit report. The report addressed nine orders placed by Sandia's Livermore Laboratory and described the general nature of the work statements included in these nine orders. For example, one work statement was to provide drafting support for a high pressure laboratory (at a cost of about $25,000); another was to fabricate a glove box (for about $30,000); and another was to modify a high pressure pump room (for about $50,000). All nine Livermore orders, according to the report, could have been placed competitively.

The internal audit report also expressed concern about Sandia's growing dependence for engineering and technical support on EG&G, an integrated contractor whose mission is to support DOE's Nevada Test Site. The report stated that much of the work could be obtained through competitive commercial sources, that Sandia could be subject to complaints that it inhibited free and open competition, and that the lack of audits of integrated contractor orders created an environment conducive to billing excessive costs.

Very little review coverage of integrated contractor orders existed at Los Alamos and Sandia. For example, a 1984 contractor procurement system review at Los Alamos briefly referred to integrated contractor orders, noting that they require no sole-source justifications. The most recent review at Sandia (1985) did not mention integrated contractor orders.

Conclusions

The Congress established full and open competition as the required standard for federal executive agencies to follow in awarding contracts. This standard emphasizes that all responsible sources are permitted to submit bids or proposals for a proposed procurement. Although DOE operating contractors are not legally bound by federal procurement statutes, according to previous GAO decisions, they should follow the general

basic principles that govern the award of contracts by the federal government when conducting their subcontracting activities. However, in some cases DOE's operating contractors failed to adequately perform or document market searches or otherwise obtain minimal competition as envisioned by these principles.

In accordance with its least-interference philosophy, DOE does not adequately stress competition in at least 3 ways. First, because DOE has not established a common definition of competition, its operating contractors use their own, differing definitions. As a result, the data that DOE gathers on competition are of little use in comparing or assessing the adequacy of subcontract competition. Similarly, these differing definitions hamper Inspector General reviews of contractors' effectiveness in achieving competition.

Second, DOE has waived its own requirement for its contractors to follow in obtaining competition. As a result, contractors rarely published notices of proposed procurements in the Commerce Business Daily. None of the 57 proposed procurements we reviewed had been advertised in the Daily, including the 31 procurements over $100,000. Considering the well-established benefits of publishing notices, DOE should require its operating contractors to comply with reasonable notice requirements. Although DOE contends that it is too costly and time-consuming for its operating contractors to publish notices for procurements in the Commerce Business Daily, DOE could not provide estimates of what the contractors' costs would be. Moreover, we found no justification for DOE's waiver of its own procurement policy requiring operating contractors to publish notices for procurements over $100,000. As stated earlier, such a requirement would affect one half of one percent of all contractors' procurement actions but would cover about 50 percent of their procurement dollars. In addition, for procurements between $25,000 and $100,000 DOE provides no specific procedures for its operating contractors to follow, such as conducting and documenting thorough market searches.

Without publishing notices or conducting thorough market searches, neither the contractors nor DOE can be sure that all potentially interested and responsive bidders have had an opportunity to compete for government subcontracts. The operating contractors maintained that it was not important to publish procurement notices because they conducted adequate market searches without publishing notices. However, at the five operating contractors we reviewed, market searches were not done, were limited, or were inadequately documented.

Finally, DOE has not periodically reviewed contractors' noncompetitive procurements of "exempted" items (i.e., B-items and items procured through integrated contractor orders). As a result, DOE cannot assure that the noncompetitive status of each exempted procurement is warranted, that prices paid are fair and reasonable, and that the industrial supply base is healthy.

Recommendations to the Secretary of Energy

We recommend that the Secretary of Energy assure that DOE's defense-related operating contractors stress competition in awarding subcontracts by taking the following actions.

- Establish a common definition of competition to ensure consistent application and reporting among operating contractors. In developing this definition, DOE should consider the requirements of federal procurement statutes and regulations.
- Enforce the DOE procedure that DOE's operating contractors publish notices in the Commerce Business Daily for all proposed procurements over $100,000 with certain exceptions as specified in the Federal Acquisition Regulation.
- For proposed procurements between $25,000 and $100,000, establish standard procedures for operating contractors to follow in seeking to obtain competition, including requirements to conduct and document thorough market searches. In addition, the Secretary should establish a task force to study whether or not the operating contractors' administrative costs of extending the requirement for publishing notices to procurements between $25,000 and $100,000 outweigh the benefits resulting from increased competition. Because of the large amounts of money involved, the study should be targeted for completion within the next 12 to 18 months.
- Regularly review contractors' use of B-items and integrated contractor orders to assure that the noncompetitive status of procurements that are "exempted" from competition is justified. Where possible to encourage wider competition, delete unwarranted B-items from the list and prohibit unnecessary integrated contractor orders.

DOE's Operating Contractors Are Required to Implement the 1986 Anti-Kickback Act

Kickbacks can have significant negative effects on government contracting, including the destruction of competition.[1] Although the emphasis on preventing and detecting kickbacks is not new, the increasing discovery of kickbacks in the defense aerospace industry over the past several years has heightened public and congressional awareness and concern about the problem. The discovery of kickbacks in the DOE contracting industry as well was brought to light recently through a Federal Bureau of Investigation (FBI) kickback investigation at DOE's Savannah River Plant. The still-ongoing investigation has already resulted in convictions of a prime contractor official and three subcontractor officials.

As a result of increasing concerns about kickbacks, Congress strengthened prior legislation (Anti-Kickback Act of 1946) by passing the Anti-Kickback Enforcement Act of 1986. The act requires that government prime contractors take steps to reduce their vulnerability to kickbacks when awarding subcontracts. The act also provides substantial criminal and civil penalties for knowing and willful involvement in kickback activities. DOE is required by the act to include in each prime contract a clause requiring the contractor to have in place and follow "reasonable" procedures designed to prevent and detect violations of the act in its own operations and business relationships. Because of the recency of the legislation and DOE's desire to await the promulgation of overall federal regulations, DOE has not taken action to include such clauses in its operating contracts, nor has DOE promulgated any interim measures to define further what reasonable procedures are. The overall federal regulations are expected to be issued by the General Services Administration in late summer 1987. However, the DOE operating contractors we visited already had in place a number of controls to prevent or detect kickbacks.

Kickbacks Are Not Only Costly, but Can Sabotage the Nation's Defense

The harmful effects of kickbacks were cited by numerous government and industry officials during a 1985-1986 investigation by the Subcommittee on Oversight of Government Management, Senate Committee on Governmental Affairs. The subcommittee found widespread kickbacks in the aerospace industry and expressed its belief that "kickbacks have no place in competent business practices and certainly no place in our defense effort" because they destroy true competition (by pushing honest subcontractors out of the market) and inflate product prices by at

[1] A "kickback" is money, gift, or compensation of any kind which is provided, directly or indirectly, to any prime contractor, subcontractor, or employee thereof for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or a subcontract

least the cost of the kickbacks. These higher costs are inevitably passed on to the taxpayers. Additionally, according to the Committee, "subcontractors who obtain business through kickbacks are more likely to supply inferior goods or services" which, in the long run, could weaken the nation's weapons systems, ultimately jeopardizing human safety and even risking lives.

The secrecy surrounding kickback activities, according to the Committee, clouds their budgetary impact. In 1985, the government spent about $147 billion on defense industry procurements; of this amount, about $46 billion was awarded to subcontractors by prime contractors. When other federal procurement costs are also considered, according to the Committee's estimate, the price inflation attributable to kickback activities may involve millions of dollars each year.

Congressional Concerns Led to Passage of the Anti-Kickback Enforcement Act of 1986

Congressional concerns about kickbacks in the aerospace industry, as evidenced during the Senate subcommittee investigation, resulted in the 1986 passage of the Anti-Kickback Enforcement Act. The subcommittee received estimates from various sources that from 10 to 50 percent of defense prime contractor procurement personnel solicited or accepted kickbacks. In testimony before a subcommittee hearing, a U.S. attorney in the Justice Department reported that subcontractor kickbacks in the defense industry are a nationwide, well-entrenched practice. Similarly, the Chief of the FBI's White Collar Crime Section testified that the FBI had identified "significant" kickback problems nationwide and had increased its prosecution of this type of defense fraud.

An FBI investigation during our review demonstrated that kickback activities are not confined to the aerospace industry. This investigation uncovered kickbacks, including conspiracy and bribery, involving a prime contractor purchasing agent at DOE's Savannah River Plant. As a result of the investigation, the purchasing agent and three officials of a subcontractor were indicted by a federal grand jury and later convicted on charges of conspiracy and bribery. The charges involved the purchasing agent's procurements of roofing materials and work from the subcontractor.

All of the individuals convicted agreed to cooperate with the FBI. Although no other indictments had been made at the time we finished our fieldwork (in March 1987), the FBI is continuing its investigation.

The 1986 Anti-Kickback Enforcement Act, resulting from congressional concerns about the extent and potential effects of kickbacks in the contracting industry, is intended to close loopholes in and broaden the coverage of the Anti-Kickback Act of 1946. For example, where the earlier act restricted the coverage of kickbacks to those that were actually made, the 1986 act includes attempted kickbacks as well, such as offers or solicitations that were refused. Whereas the earlier act provided a maximum prison term of 2 years, the 1986 act increases that to 10 years. The original act had authorized a maximum fine of $10,000. This was increased by the Criminal Fine Enforcement Act of 1984 to $250,000 for an individual and $500,000 for a corporation. The 1986 act retained these limits. Also, the 1946 act allowed the government to recover the kickback amount from the person or corporation that violated the law. The 1986 act allows a civil action for recovery from the violator of double the kickback amount plus up to $10,000 more for each kickback occurrence. Furthermore, the government may obtain a civil penalty equal to the amount of the kickback from any person or company whose employee, subcontractor, or subcontractor's employee violates the act by providing, accepting, or charging a kickback. These more stringent civil penalties were designed not only to compensate the government for its loss, but also to induce prime contractors to be more vigilant by making them financially liable for kickbacks involving their employees and subcontractors.

What Are "Reasonable" Anti-Kickback Procedures?

Although judgment is required in defining and developing the "reasonable" procedures that the act requires, contracting entities can draw from specific procedures recommended by the Senate Committee on Governmental Affairs and by the Commander of the Air Force Contract Management Division.

The Senate Committee's report on Senate Bill 2250, the bill from which the 1986 act was passed, cited examples of procedures that contractors could implement to reduce their vulnerability to kickbacks. These procedures include developing, implementing, and publicizing

- company ethics rules prohibiting kickbacks;
- education programs for new employees and subcontractors;
- requirements that subcontractors periodically declare (e.g., upon subcontract award) that they have not paid kickbacks to obtain favorable treatment;
- procurement procedures which limit buyers' authority to approve bids and control receipt of bid packages;

- audit procedures designed to detect kickbacks (e.g., reviews of employee expense reports and of documentation supporting subcontract awards);
- periodic surveys of subcontractors to elicit information about kickbacks;
- information "hotlines" to handle anonymous tips; and
- procedures for reporting possible kickback activities to law enforcement officials.

According to the Committee report, two types of procedures merit special attention: those requiring annual employee declarations that they have read and will abide by the company's ethics rules and those encouraging exchange of information among contractors about prospective, current, and former employees to preclude reemployment of corrupt former employees.

Similar procedures were suggested by the Commander, Air Force Contract Management Division, at an April 1986 conference of the Aerospace Industries Association of America. Administering over 40,000 contracts with a face value of over $114 billion, the Contract Management Division is the Air Force's systems acquisition contract management agency and provides support to Army, Navy, and National Aeronautics and Space Administration contracting functions. In the opinion of the Commander, the Contract Management Division has developed a model ethics program which has been "hailed and copied throughout the Air Force and by other services." The procedures he suggested were based on his Division's "Straight Arrow" ethics program and on "the best of" industry programs and procedures designed to promote industry and employee involvement in preventing and detecting kickback activities. He suggested that contractors establish meaningful ethics programs by following some "basic, fundamental steps:"

- assign a full-time ethics director;
- establish an ethics training program;
- establish firm gratuities policies defining unacceptable conduct;
- implement a disciplined procurement process by limiting signatory authority, controlling the bid review, selection process, and the bid cutoff dates, rotating blanket purchase agreements among different companies, and validating prices regularly;
- strengthen internal audit procedures;
- implement a fraud hotline;
- exchange ideas and information with others in the industry;
- rotate buyers periodically; and

- establish follow-on employment restrictions (i.e., prohibiting an employee's acceptance of employment with a supplier or vendor for a certain period of time after leaving the contractor's employ).

According to the Commander, contracting agencies must "avoid even the perception of impropriety, because to the taxpayer, perception is reality." Thus, he said, industry practices and procedures "must be beyond reproach" and must "demonstrate sound business management. To do less is a breach of the public trust." Accordingly, on June 30, 1987, Air Force Systems Command officials told us that clauses have been incorporated in their prime contracts requiring the contractors to implement reasonable procedures to protect against kickbacks.

DOE Contractors Have Some Anti-Kickback Controls in Place

Although DOE's operating contractors had a number of controls and procedures to prevent and detect kickbacks, there were additional controls which they could take. At the five contractor locations we visited, contractor officials said that the following anti-kickback procedures were in place:

- All five contractors had ethics training programs, explicit policies governing employee acceptance of gratuities, and internal audit procedures designed to prevent and detect kickbacks.
- Four of the five contractors had a procurement process designed to limit signatory authority and to control the bid review and selection process.
- Three of the five contractors had an ethics director and a system for exchanging information, ideas, and problems with other contractors and industry representatives.

However, the operating contractors had not instituted some procedures that were suggested by the Senate report. For example, only one of the operating contractors had established a fraud hotline, and none had policies restricting reemployment and requiring periodic rotation of buyers (e.g., every 2 years).

Conclusions

The recent passage of the Anti-Kickback Enforcement Act should help DOE reduce its operating contractors' vulnerability to kickbacks. According to section 7 of the act, federal agencies are required to include in their contracts a clause requiring contractors to develop and implement "reasonable" anti-kickback procedures. Because of the recency of the act, and because it awaits overall federal regulations, DOE has not yet taken the required action. While the act does not specify the procedures

to be established, we believe that DOE and its contractors can draw on at least two sources for guidance: the Senate Committee on Governmental Affairs' report on Senate bill 2250 (the Anti-Kickback Enforcement Act of 1986) and the anti-kickback procedures outlined by the Commander of the Air Force Contract Management Division.

DOE should require its contractors to adopt uniform, minimum procedures designed to implement provisions of the act. In our opinion, these procedures should be as specific as possible (e.g., a listing of the minimum anti-kickback procedures required) so that DOE is assured that its contractors have protection against kickbacks. Furthermore, the contractors would be free to supplement these procedures as they deem appropriate.

Recommendation to the Secretary of Energy

We recommend that the Secretary of Energy develop uniform, minimum anti-kickback procedures to be used in implementing the Anti-Kickback Enforcement Act of 1986. These procedures should be consistent with the government-wide procedures being developed by the General Services Administration and expeditiously incorporated into DOE's defense-related operating contracts.

DOE Does Not Require Its Operating Contractors to Follow Federal Payment Procedures

Based on its least-interference policy, DOE does not require its operating contractors to comply with the prompt payment requirements that comprise standard federal procedures. Consequently, the operating contractors we visited generally do not pay interest penalties on late payments to their subcontractors, and one of them routinely takes discounts whether or not the discount period has expired. Also, one of the contractors made payments earlier than necessary and estimated that it could have saved about $512,000 in interest expense in fiscal year 1985 by paying invoices closer to the due dates.

Amply documented through congressional investigations and hearings, the effects of late payments can include inhibited competition, project disruptions and delays, and increased costs to the government. Small businesses are especially vulnerable to problems caused by late payments because they often have less financial flexibility than larger companies and may have to pay higher interest rates on money borrowed to finance their operations while awaiting payment from the government or its contractors.

The Government's Poor Payment Record Led to the 1982 Prompt Payment Act

To alleviate many of the problems caused by the government's reputation as a slow payer, the Congress passed the 1982 Prompt Payment Act. Suppliers of goods and services to the government, especially small businesses, were reluctant to compete for government contracts when the government failed to pay its bills on time. Through the Prompt Payment Act, the Congress sought to provide incentives for the federal government to pay its bills on time. Essentially, the act requires the government to pay its contractors by the due date specified in the contract or within 30 days if no contractual due date is specified. (The act prescribes more stringent payment requirements for certain perishable foodstuffs.) The act also requires federal agencies to automatically pay interest penalties when (1) payments for goods and services are more than 15 days late (i.e., after the grace period has expired) or (2) an agency takes a discount after the discount period has expired.

Although the Prompt Payment Act does not apply to payments to subcontractors by DOE's operating contractors, these contractors act on behalf of the federal government when entering into subcontracts and accepting performance by the subcontractors. Nevertheless, in keeping with its least-interference philosophy, DOE does not require its contractors to include in their contracts payment clauses that reflect normal federal procedures.

Operating Contractors Generally Do Not Pay Interest Penalties for Late Payments

As a matter of policy, the four operating contractors whose payment practices we reviewed do not pay interest penalties on late payments to their subcontractors.[1] One operating contractor official said that it was considered a corporate "better business practice" to not pay such penalties. Another contractor official said that DOE had directed him not to pay interest penalties.

The contractors' payment procedures required that payment generally be made 30 days after invoice receipt. Similarly, the Prompt Payment Act requires that, if a contract is silent regarding payment timing, payment be made 30 days after receipt of a proper invoice or acceptance of goods or services, whichever is later. The act goes further, however, in that it requires automatic payment of interest penalties for payments made after expiration of the 15-day grace period following the payment due date. Regarding discounts offered for early payment, contractor policies and the Prompt Payment Act alike encourage contractors to take advantage of them whenever possible. Again, however, the act goes further in that it requires payment of interest penalties when discounts are taken after the discount period has expired and the underpayment has not been corrected within 15 days after the last day of the discount period.

Operating contractor officials said their policy of not paying interest penalties on late payments is not very significant because they pay most invoices on time. The limited payment data we reviewed supported this statement, but we could not project the results to the contractors' total payments. For example, of 24 randomly selected payments (totaling about $86,000) at DOE's Kansas City Plant, 10 were paid late (more than 30 days past invoice receipt), but only 3 of them (totaling about $5,000) were more than 15 days late. If the contractor had paid interest penalties on those three payments, the penalties would have totaled about $34. Similarly, of 759 payments (totaling about $1.9 million) that we reviewed at the Sandia facility, 10 were paid late, but only 2 (totaling about $13,000) were more than 15 days late.[2] Had interest penalties been paid on those two payments, the penalties would have totaled about $84.

[1]We reviewed payment practices at DOE's Sandia, Los Alamos, Kansas City, and Savannah River facilities.

[2]The 759 payments represented one day's (April 15, 1986) payment transactions, as listed on Sandia's daily report.

At the Savannah River and Los Alamos facilities, the contractors do not keep records of late payments. According to a Los Alamos contractor official, such records are not needed because they have no policy requiring payment of interest penalties for late payments. Savannah River, however, kept records of the total amounts of interest penalties paid annually. According to the records, the contractor paid no penalties in fiscal year 1984, but paid $1,350 the next year. Their policy is to not pay interest penalties unless the vendor submits a second request for penalty payment, according to a Savannah River contractor official. Even then, according to the official, the penalty is paid only if the contractor's analysis determines that the contractor was at fault for the late payment.

At the Kansas City facility, the operating contractor did not pay interest penalties for unearned discounts taken (i.e., discounts taken after expiration of the discount period). The contractor, as a matter of policy, took discounts offered for early payments regardless of whether it paid within the time period specified in the discount terms. If the specified time period had expired and the vendor complained, then the contractor would repay the discount but would not include any interest penalty. According to its payment records, the Kansas City contractor repaid 102 unearned discounts in fiscal years 1983, 1984, and 1985, but did not pay interest penalties on them.

Late Payments Can Adversely Affect Subcontractors and the Government

According to one contractor official, the policy of not paying interest penalties saves the government money. While that may be true in the short term, late payments penalize the subcontractors and may, in the long term, result in cost increases to the government that more than offset any short-term savings.

In a recent hearing, the House Committee on Government Operations revealed the magnitude and severity of subcontractor payment delays.[1] According to the Committee report on the hearing, representatives from three subcontractor associations testified that their members, who are often small businesses, are not being paid promptly by their general contractors for work on federal projects. They contended that slow payment to subcontractors disrupts and delays these projects and ultimately increases their cost to the government.

[1]Hearing on "Implementation of the Prompt Payment Act," before the Legislation and National Security Subcommittee of the Committee on Government Operations, July 29, 1986, 99th Congress, 2d Session.

Subcontractor groups, according to the Committee report, have proposed amending the Prompt Payment Act to impose its provisions on prime contractors. Such a proposal would require a prime contractor to pay its subcontractors within a few days after receiving payment from the government. If a payment were late, then interest would be due the subcontractor at the prime contractor's expense.

Prime contractors, said the Committee report, opposed imposition of prompt payment requirements on prime contractors on the grounds that such requirements would infringe on the privity of the contractual relationship between prime contractors and subcontractors. The subcontractors' response, however, noted that the government imposes other requirements, such as affirmative action requirements, in agreements between prime contractors and subcontractors. According to a subcontractor association representative cited in the report:

"On Federal and Federally-assisted work the relationship between a prime contractor and his subcontractors is molded, shaped and constrained by these pass-through requirements. About all that are not passed through are the protections of Federal contract law, which the prime contractor reserves exclusively for himself."

The Committee, concerned about the plight of subcontractors who are not paid promptly, pledged to continue reviewing the problem.

DOE conducts, about once every three years, a contractor procurement system review of each of its operating contractors. However, DOE has not directed its reviewers to examine contractors' payment practices except to report on the adequacy of the contractors' policies, procedures, and practices for seeking and taking advantage of discounts.

One Contractor Made Payments Earlier Than Necessary

As discussed above, federal payment policies require that payment be made 30 days after receipt of a proper invoice or acceptance of goods or services, whichever is later, unless contract terms specify otherwise. At three of the four facilities included in our review of payment practices, such practices were generally consistent with federal policies. However, at the Savannah River facility, the contractor had been paying invoices too early, resulting in earlier than necessary government expenditures and thus causing the incurrence of unnecessary interest expenses. In a July 1986 study, the contractor determined that by scheduling its payments based on the dates it received invoices rather than the dates vendors prepared invoices, it could have saved about $512,000 in interest expenses during calendar year 1985 and in subsequent years. These

potential savings could have been even greater had the contractor based its savings calculation on the federal payment procedures discussed above. According to contractor officials, they had changed their payment procedures effective October 1, 1986, to make payments based on the dates invoices were received rather than on the dates vendors prepared invoices.

Conclusions

DOE has not required its operating contractors to follow normal federal procedures in their subcontract payment policies. Although DOE could, by contract, bring its contractors under the same payment procedures required by the Prompt Payment Act, it has not done so, in keeping with its least-interference policy. Although operating contractors pay most invoices on time, when late payments are made they generally do not pay interest penalties to subcontractors, and one contractor routinely takes discounts regardless of whether the discount period has expired. These practices are inconsistent with the Prompt Payment Act. Although the unpaid interest penalties that we identified at 2 contractors were relatively small, the other 2 contractors had no records on late payments, and we did not review payment practices at the other 12 defense facilities.

One contractor recently made changes to its payment procedures which, in 1985, had resulted in unnecessary interest expense of about $512,000 because it made payments earlier than necessary. According to the contractor, similar savings will be realized annually.

DOE cannot ensure that the requirements of the Prompt Payment Act are met unless it requires contractor compliance and evaluates contractor payment practices.

Recommendations to the Secretary of Energy

We recommend that the Secretary of Energy require

- contractors to implement practices consistent with the Prompt Payment Act and to maintain records to allow evaluation of their practices, and
- DOE operations office managers to evaluate contractor payment practices as part of their contractor procurement system reviews. This would include follow-up of any promised corrective actions.

DOE Contractors' Payment of Certain State Taxes Costs the Government Millions of Dollars a Year

Even though DOE's contractor-operated laboratories and production plants are wholly government-owned and dedicated exclusively to government programs, they are subject in some states to taxes from which the federal government itself is exempt. In New Mexico, for example, the Sandia Corporation, which operates DOE's Sandia National Laboratories, must pay state gross receipts and compensating use taxes that would not be assessed if the facility were government-owned and government-operated rather than government-owned and contractor-operated.[1] Because DOE has fully reimbursable, cost-type contracts with its operating contractors, the government, in effect, not Sandia, is paying the taxes. Over the 5-year life of the contract, these taxes are estimated to total about $100 million.

If many other states follow New Mexico's lead in assessing these taxes, the federal government's cost to operate these laboratories and production plants could become much more expensive. Such taxes could total hundreds of millions of dollars a year. Federal government agencies own about 120 contractor-operated facilities located in at least 38 states. In March 1987, Missouri was already imposing taxes similar to New Mexico's on a DOE operating contractor in Kansas City, and Texas and Ohio were considering such taxation.

Congressional action, according to the Supreme Court, would be required to exempt operating contractors from state taxation (at least when the contract terms are like those between Sandia and DOE). DOE challenged the New Mexico tax in court actions which ultimately led to a March 24, 1982, Supreme Court decision (United States v. New Mexico, 455 U.S. 720 (1982)). The Supreme Court ruled in the state's favor and required Sandia to pay New Mexico the annual taxes plus an initial settlement of $240 million. In the decision, however, the Court said that the Congress, not the Court, should resolve the complex problem of whether operating contractors' activities should be immune from state taxation.

State Taxation Could Adversely Affect the Federal Budget

In the coming years, the federal government could bear an increasingly severe cost to operate government-owned and contractor-operated facilities because of state and county taxation of these facilities. Although few states now tax such facilities, others are considering doing so, and the concept could spread to at least 38 states that collectively contain

[1]Gross receipts and compensating use taxes are calculated through a complicated formula that considers a variety of exclusions and deductions. In effect, the gross receipts tax is a tax on the in-state sale of goods and services. The compensating use tax is imposed on property acquired out of state in a transaction that would have been subject to the gross receipts tax had it occurred within the state

about 120 government-owned, contractor-operated facilities. If that happened, the total cost to the federal government (via reimbursements to its contractors) would potentially be hundreds of millions of dollars a year.

DOE alone owns about 50 contractor-operated facilities (17 defense-related and about 35 non-defense-related), all of which operate under fully reimbursable cost-type contracts. One DOE defense-related facility alone, Sandia Laboratories (operated by the Sandia Corporation), will be assessed about $33.6 million in fiscal year 1987 for New Mexico gross receipts and compensating use taxes (up from about $22.8 million in fiscal year 1984). If all 15 of DOE's defense-related operating contractors, excluding the 2 that are nonprofit entities,[2] were required to pay such state taxes, the cost to the federal government could amount to about $100 million each year.

Further, if the approximately 70 other federal government-owned and contractor-operated facilities were also assessed similar state taxes, the government's costs attributed to these taxes would be even larger. According to Army and Federal Procurement Data System records provided by the General Services Administration, agencies other than DOE own contractor-operated facilities located in at least 38 states as well as the District of Columbia and Puerto Rico. These agencies include the Departments of the Army, Navy, Air Force, Health and Human Services, Interior, and Transportation, as well as the Environmental Protection Agency, National Science Foundation, and the National Aeronautics and Space Administration. The majority of these agencies' facilities, like DOE's, are operated under fully reimbursable, cost-type contracts.

Missouri already imposes taxes similar to New Mexico's on the Bendix Corporation, which operates DOE's Kansas City Plant, and Ohio is considering similarly taxing DOE's three Ohio facilities: the Feed Materials Production Center (operated by Westinghouse Materials Company) in Fernald, the gaseous diffusion plant (operated by Goodyear Atomic Corporation) in Portsmouth, and the Mound production plant (operated by Monsanto Research Corporation) in Miamisburg. Texas is also considering imposing taxes similar to New Mexico's on DOE's Pantex Plant (operated by Mason and Hanger-Silas Mason Co., Inc.) in Amarillo.

[2]The Los Alamos and Lawrence Livermore Laboratories are not assessed state taxes because they ar university affiliates.

In addition to the Missouri state taxes, Bendix may have to pay county taxes on DOE-owned personal property, manufacturing equipment, and real property. According to a DOE official's estimate, if Jackson County succeeds in its attempt to assess taxes, the annual county taxes could be $8 to $10 million, in addition to a one-time assessment of about $50 million.

Only Congress Can Change Contractors' Status From Taxable to Nontaxable

In a March 1982 decision, the Supreme Court ruled that Sandia could be exempted from state tax only through congressional action; Sandia could not be exempted because its relationship with DOE did not make it an instrumentality of the federal government. Leading up to the Supreme Court decision was DOE's objection to New Mexico's tax assessments on the Sandia Corporation and two other DOE contractors. The federal government brought suit in federal district court, seeking a declaratory judgment that (1) advanced funds were not taxable gross receipts to the Sandia Corporation;[3] (2) the receipts of vendors selling property to the government through the Sandia Corporation could not be taxed by the state; and (3) the use of government-owned property by Sandia was not subject to the use tax. In presenting its case, the federal government argued that the Sandia Corporation was so closely connected to the government that the two cannot realistically be viewed as separate and that, therefore, Sandia shared the government's constitutional immunity to state taxation.

The district court ruled for the government, but the court of appeals reversed the decision, taking the view that the government-contractor relationships in question did not so incorporate the contractors into the government structure as to make them "instrumentalities of the United States" immune from the New Mexico taxes. The appeals court held that the contractors, as independent taxable entities, are not protected by the Constitution's guarantee of federal supremacy, and hence are subject to the state taxes in question.

The Supreme Court affirmed the appeals court judgment. The Court examined the nature of the relationship between DOE and its contractors and concluded that the contractors cannot be termed "constituent parts" of the federal government. Although their operations are dedicated exclusively to federal programs and activities (nuclear weapons

[3]DOE contracts use an "advanced funding" procedure to meet contractor costs. Under this procedure, the contractor can pay creditors and employees with drafts drawn on a special bank account in which U.S. Treasury funds are deposited. In this way, only federal funds are expended when the contractor meets its obligations.

research and development), the contractors derive multiple benefits from their contractual relationship with the government, according to the Court. For example, the contractors develop expertise, acquire valuable technical information, and are guaranteed royalty-free, irrevocable licenses for certain discoveries or inventions their employees develop during the course of the contract. Thus, according to the Court, the "congruence of professional interests between the contractors and the Government is not complete . . ."

Further, the court found it constitutionally irrelevant that the United States reimbursed all the contractor's expenditures, including those going to meet the tax:

"[I]mmunity may not be conferred simply because the tax has an effect on the United States, or even because the Federal Government shoulders the entire economic burden of the levy."

That the contractor is purchasing property for the government, according to the Court, is similarly irrelevant.

The Supreme Court further noted, however, that the Congress is the appropriate entity to resolve such complex taxation problems, citing the political process as being "uniquely adapted to accommodating the competing demands" in this area. According to the Court,

"If the immunity of federal contractors is to be expanded beyond its narrow constitutional limits, it is Congress that must take responsibility for the decision . . . But absent congressional action, we have emphasized that the States' power to tax can be denied only under 'the clearest constitutional mandate.'"

DOE Plans No Action

For two reasons, according to a DOE official, DOE did not pursue the matter further by seeking congressional resolution of the tax question. First, DOE officials believe that such a resolution might necessitate a change in their least-interference philosophy. That is, they believe that if the Congress were to designate DOE operating contractors as "instrumentalities of the federal government" and thus immune from state taxation, such a designation could also require contractor compliance with many other federal laws and regulations. If that were the case, according to DOE officials, both contractor compliance and DOE oversight could be costly in terms of the paperwork burden, internal controls, and associated costs

entailed. Second, DOE officials believe that the issue of operating contractors' taxation by state and local governments is not unique to DOE, but pertains to many other federal government agencies as well.

GAO Observations

The Supreme Court has ruled that DOE's operating contractors are not instrumentalities of the United States and are, therefore, not protected by the Constitution's federal supremacy clause. The Court pointed out, however, that the Congress may, if it chooses, decide whether political or economic considerations suggest that a broader immunity rule is appropriate.

The cost of state taxation of operating contractors is certainly one of these considerations. Because the operating contractors all have cost-type contracts with federal agencies, the government, in effect, pays the state taxes that are levied on the contractors. Thus, if the operating contractors were exempt from state taxes, the federal government would save millions of dollars in current state taxes as well as possibly hundreds of millions of dollars in future state taxes. Regarding DOE's concern that designating its contractors as federal agents would also subject them to other federal statutes, we believe the Congress could take legislative action to instead exempt the contractors from certain state taxes.

The effect on the states must also be considered. If the operating contractors were exempted from state taxation, the states would suffer corresponding losses in tax income. The precise amounts of savings and losses depend on the extent to which states are currently taxing or decide to tax government-owned, contractor-operated facilities.

Matter for Consideration of the Congress

In view of congressional concern about the national debt and the need to reduce federal expenditures, the Congress may wish to consider exempting federal agencies' operating contractors from certain state taxes.

Description of DOE Defense Operating Contractor Research, Development, Testing, and Production Facilities

Research

Los Alamos Laboratory

Los Alamos was established in 1943 by the U.S. Army's Manhattan Engineer District to develop the first atomic bombs. The laboratory is located in Los Alamos County, New Mexico, and is operated by the University of California under contract from February 2, 1982, to September 30, 1987. DOE's Albuquerque Operations Office administers the contract. The primary mission of the laboratory continues to be designing and developing nuclear weapons. From the beginning, however, the laboratory has also explored the peaceful uses of atomic energy, including nuclear power production, nuclear rocket propulsion, radioisotopic power sources for space systems and space applications, and radiomedical research. Averaged over the years, approximately half of the laboratory's budget has been provided by weapons-related work. Other funding has been derived from medical, environmental, industrial, and energy-related research.

Lawrence Livermore Laboratory

Lawrence Livermore National Laboratory is operated for DOE by the University of California. The contract, which is administered by the San Francisco Operations Office, runs from October 1, 1982, to September 30, 1987. Nuclear weapons research and development are the prime functions of the laboratory, with additional programs in magnetic fusion research, laser isotope separation, non-nuclear energy research and development, biomedical studies, and laser fusion research. The laboratory is located about three miles east of Livermore, California.

Sandia Laboratories

The Sandia Corporation operates the Sandia National Laboratories; the prime contract, administered by DOE's Albuquerque Operations Office, runs from October 1, 1983, to September 30, 1988. Sandia consists of the headquarters facilities in Albuquerque, New Mexico; the laboratory facility in Livermore, California; and the Tonopah Test Range in Nevada. Sandia has been assigned work on the development and assembly of nuclear weapons systems, non-nuclear component design and development, field and laboratory testing, manufacturing, ordnance engineering, quality assurance, stockpile surveillance, and military training. Other nonweapons research and development activities have been assigned, including extensive solar power research and support of radioactive waste management projects.

Testing

Nevada Test Site

The major programs at the Nevada Test Site include nuclear weapons development, proof-testing and weapons safety, basic research in high-energy nuclear physics, and studies of high-level-waste storage. The site is located in Nye County, Nevada, about 62 miles northwest of Las Vegas. The Nevada Operations Office administers several contracts, the largest with Reynolds Electric and Engineering from October 1, 1983, to September 30, 1988.

Weapons Production

Rocky Flats Plant

The Rocky Flats Plant, which became operational early in 1952, is located about 21 miles northwest of Denver on 6,550 acres. Rockwell International has operated the plant since 1975. The Albuquerque Operations Office administers the contract, which runs from January 1, 1986, to December 31, 1988. Functions performed at the plant include plutonium component fabrication, plutonium reclamation, and the manufacture of various stainless steel, beryllium, and uranium alloy components.

Y-12 Plant

The Y-12 Plant at Oak Ridge, Tennessee, was an original part of the World War II Manhattan Project. Today, Y-12 is a major nuclear weapons production plant and supports DOE's gaseous diffusion uranium-235 isotope enrichment facility and the Oak Ridge National Laboratory. Martin Marietta Energy Systems, Inc., operates the plant under a contract running from March 30, 1984, to September 30, 1989, and administered by the Oak Ridge Operations Office.

Savannah River Plant

The nuclear weapons production work at the Savannah River Plant is a small part of the total DOE work performed at this location. The plant, operated by Du Pont, is DOE's principal source of plutonium and tritium production. The weapons production work is limited to tritium processing. Facilities include nuclear production reactors, chemical separation areas, a uranium fuel processing area, the Savannah River Laboratory, and necessary support operations. The Savannah River Operations

Office administers the contract, which runs from October 1, 1984, to September 30, 1989.

Pantex Plant

The Pantex Plant, located 25 miles northeast of Amarillo, Texas, has been operated by Mason & Hanger-Silas Mason Co., Inc., since 1956. The Albuquerque Operations Office administers the contract, which runs from October 1, 1986, to September 30, 1991. Plant functions include the fabrication of chemical explosives; development work in support of the design laboratories; and nuclear weapons assembly, disassembly, testing, quality assurance, repair, retirement, and disposal.

Pinellas Plant

The General Electric Company constructed the Pinellas Plant to manufacture electronic components and now operates it for DOE. The Albuquerque Operations Office administers the contract, which runs from October 1, 1983, to September 30, 1988. The plant, which occupies about 100 acres in the center of Pinellas County, Florida, near St. Petersburg, develops and produces neutron-generating devices, neutron detectors, and associated product testers. Other technical work involves electronic, ceramic, and high vacuum technology.

Mound Plant

Monsanto Research Corporation, a Monsanto Company subsidiary, operates the Mound Plant in Miamisburg, Ohio. DOE's Albuquerque Operations Office administers the contract, which runs from October 1, 1983, to September 30, 1988. The plant is a research, development, and production facility that manufactures detonators and other small explosive components for weapons. Research and development work includes support for production operations; research on the physical properties of plutonium-containing reactor fuels; and the separation, purification, and distribution of stable isotopes for medical, industrial, agricultural, and research use.

Kansas City Plant

Since 1962, the Kansas City Plant has been operated by the Bendix Corporation, now a subsidiary of Allied Corporation. The Albuquerque Operations Office administers the contract, which runs from January 1, 1987, to December 31, 1991. The plant's principal mission is to produce and procure nonnuclear electrical, electronic, electromechanical, mechanical, plastic, and nonfissionable metal components for the weapons program.

Material Production

Savannah River Plant

The Savannah River Plant produces plutonium, tritium, and other special nuclear materials that are used for the national defense, other government programs, and some civilian purposes. Current operating facilities include three nuclear production reactors, two chemical separations facilities, and a fuel target fabrication facility. Extensive research is conducted in the associated Savannah River Laboratory and Savannah River Ecology Laboratory.

Hanford Site

The Hanford Site is in a largely rural area of southeastern Washington state. The principal tasks at the site include operation of a nuclear reactor (which supplies the Pacific Northwest's power grid in addition to producing plutonium), nuclear fuel fabrication, liquid waste solidification, operation of the Fast Flux Test Facility, and a broad variety of energy-related and other research. The Richland Operations Office administers several contracts, the largest with Rockwell International to operate the facility from September 30, 1982, to September 30, 1987. In December 1986, DOE announced that Westinghouse will become the primary contractor for the facility in October 1987.

Y-12 Plant

At the Y-12 Plant, highly enriched uranium oxides from nonproduction fuels processed at the Idaho Fuels Processing Facility and highly enriched uranium nitrate solution from production reactor fuels processed at the Savannah River Plant are converted to uranium metal for storage and reuse as fuel in the Savannah River production reactors. The Y-12 Plant also produces lithium compounds and deuterium for nuclear weapons and deuterium for DOD high-energy laser development. Enriched lithium from retired weapon components is received and recycled in the weapon program or used as targets in the Savannah River production reactors for tritium production. Highly enriched uranium scrap from DOD programs is also recovered.

Fernald Plant

The Feed Materials Production Center provides materials for the four production centers. The primary activity is the production of purified uranium metal and compounds. The uranium may be depleted, normal, or slightly enriched. The Oak Ridge Operations Office administers the

contract, which runs from January 1, 1986, to September 30, 1991, with Westinghouse Materials Company.

Idaho Plant

The Idaho Chemical Processing Plant recovers uranium from spent nuclear fuels, largely from government-owned reactors. Secondary functions include recovering valuable rare gases and developing improved fuel processing and waste management methods. Westinghouse Idaho Nuclear Company operates the plant for DOE under a contract running from March 5, 1984, to March 5, 1989. The Idaho Falls Operations Office administers the contract.

Uranium Resources and Enrichment Plants

The DOE uranium enrichment complex consists of three gaseous diffusion plants at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. The Oak Ridge Facility, which is currently not in use, had been used to enrich uranium-235 isotopes for reactor fuels. The Paducah Plant is a uranium enrichment cascade with an associated manufacturing plant and extensive support facilities. The Oak Ridge and Paducah facilities are operated by Martin Marietta Energy Systems under a contract which runs from March 30, 1984, to September 30, 1989, and is administered by the Oak Ridge Operations Office. The Portsmouth Plant primarily separates uranium isotopes through gaseous diffusion. Portsmouth is operated by Goodyear Atomic Corporation under a contract which runs from March 17, 1982, to June 30, 1988, and is administered by the Oak Ridge Operations Office.

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