

GAO

Resources, Community, and Economic
Development Division

October 1995

**Energy and Science
Issues Issue Area**

Active Assignments

064970/155446

Foreword

This report was prepared primarily to inform Congressional members and key staff of ongoing assignments in the General Accounting Office's Energy and Science Issues issue area. This report contains assignments that were ongoing as of October 2, 1995, and presents a brief background statement and a list of key questions to be answered on each assignment. The report will be issued quarterly.

This report was compiled from information available in GAO's internal management information systems. Because the information was downloaded from computerized data bases intended for internal use, some information may appear in abbreviated form.

If you have questions or would like additional information about assignments listed, please contact Victor Rezendes, Director, on (202) 512-3841; or Bernice Steinhardt, Associate Director, on (202) 512-6543.

Contents

	Page
MISSIONS & MANAGEMENT OF E&S AGENCIES	
• DEPARTMENT OF ENERGY: FOLLOW-UP ON PROPERTY MANAGEMENT PROBLEMS AT THE ROCKY FLATS PLANT.	1
<i>New</i> • DOE'S ABILITY TO MAINTAIN NUCLEAR WEAPONS.	1
<i>New</i> • REVIEW RESTRICTIONS ON DISPOSAL OF SURPLUS FEDERAL WEAPONS AND MILITARY-STYLE EQUIPMENT.	1
<i>New</i> • DOE'S MANAGEMENT OF MAJOR SYSTEMS ACQUISITIONS.	2
<i>New</i> • DEPARTMENT OF ENERGY: REVIEW OF THE SECRETARY OF ENERGY'S TRAVEL FUNDING.	2
<i>New</i> • SURVEY OF DOE'S VITRIFICATION START-UP PLANS.	2
<i>New</i> • INFORMATION ON DOE OFFICE OF ENVIRONMENTAL MANAGEMENT'S EFFORTS TO REDUCE FUTURE PROGRAM COSTS..	3
• FINANCIAL AND OPERATING CONDITIONS OF PMAS.	3
• HUMAN AND FINANCIAL RESOURCES USED IN ACCOMPLISHING THE MISSIONS OF THE DEPARTMENT OF ENERGY.	3
<i>New</i> • HRA 14: SURVEY OF DOE'S FFRDC MANAGEMENT FEES.	4
<i>New</i> • USE OF DOE'S SURPLUS REAL PROPERTY FOR ECONOMIC DEVELOPMENT.	4
<i>New</i> • HRA 14: ANALYSIS OF DOE'S USE OF SUPPORT SERVICE CONTRACTORS.	4
NUCLEAR WEAPONS/POWER	
• RECURRENCES OF REPORTED EVENTS AT DOE SITES.	5
<i>New</i> • DOE ENVIRONMENTAL MANAGEMENT PROGRAM UNCORRECTED BALANCES.	5
• COST-EFFECTIVENESS OF DOE'S ENVIRONMENTAL TECHNOLOGY DEVELOPMENT PROGRAM.	5
<i>New</i> • SURVEY OF DOE'S USE OF EXPEDITED RESPONSE ACTIONS TO CLEAN-UP THE WEAPONS COMPLEX.	6
<i>New</i> • CHARACTERIZING HANFORD'S HIGH-LEVEL WASTE TANK FARMS.	6
ENERGY R&D	
<i>New</i> • RECOUPMENT OF FEDERAL COST-SHARE INVESTMENT IN SUCCESSFULLY COMMERCIALIZED TECHNOLOGIES.	6
BALANCING ENERGY SUPPLY AND DEMAND	
<i>New</i> • THE 1995 NATIONAL ENERGY POLICY PLAN (NEPP): ADDRESSING U.S. RELIANCE ON OIL IMPORTS.	7
COMPETITION/SECURITY FOR ENERGY SUPPLIES	
• REVIEW OF NRC'S INSPECTION PROGRAM.	7
• UNRESOLVED REGULATORY AND OPERATIONAL ISSUES AFFECTING DOE'S WASTE ISOLATION PILOT PLANT.	7
• BRIEFINGS AND OTHER ASSISTANCE TO THE HOUSE REPUBLICAN TASK FORCE ON THE DEPARTMENT OF ENERGY IN THE AREA OF REMOVING THE CIVILIAN RADIOACTIVE WASTE PROGRAM FROM DOE.	8
<i>New</i> • STATE OF NEVADA'S USES OF FUNDS APPROPRIATED FROM THE NUCLEAR WASTE FUND.	8
<i>New</i> • ISSUES CONCERNING THE REMOVAL OF THE CIVILIAN RADIOACTIVE WASTE PROGRAM FROM THE DEPARTMENT OF ENERGY.	8
• ELECTRIC VEHICLES: EFFORTS TO COMPLETE ADVANCED BATTERY DEVELOPMENT WILL REQUIRE MORE TIME AND FUNDING.	9
<i>New</i> • REVIEW OF DOMESTICALLY PRODUCED OXYGENATED FUELS IN GASOLINE.	9
SCIENCE & TECHNOLOGY	
• AN IMPACT ASSESSMENT OF THE ADVANCED TECHNOLOGY PROGRAM (ATP).	9
• LESSONS LEARNED BY FIVE STATE CENTERS UNDER THE PILOT TECHNOLOGY ACCESS PROGRAM (TAPP).	10
• REVIEW OF THE SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PILOT PROGRAM.	10
<i>New</i> • CAPABILITIES, CONDITION AND RESOURCE REQUIREMENTS OF DOE LABORATORY FACILITIES.	10
<i>New</i> • REVIEW OF THE PATENT EXAMINATION OPERATIONS OF THE PATENT AND TRADEMARK OFFICE (PTO).	11

	Page
SCIENCE & TECHNOLOGY POLICIES/PROGRAM	
• SAFETY OF FSU NUCLEAR FACILITIES.	11
• FSU NUCLEAR MATERIAL CONTROLS.	11
<i>New</i> • ASSESSMENT OF U.S.-EURATOM AGREEMENT ON NUCLEAR COOPERATION.	12
OTHER ISSUE AREA WORK --ENERGY & SCIENCE	
• URANIUM MILL TAILINGS PROGRAM.	12
• REVIEW OF THE UNITED STATES ENRICHMENT CORPORATION'S PRIVATIZATION PLAN.	12
• CONSIDERATION OF CARRY-OVER BALANCES IN DOE'S BUDGET DEVELOPMENT PROCESS.	13

MISSIONS & MANAGEMENT OF E&S AGENCIES

TITLE: DEPARTMENT OF ENERGY: FOLLOW-UP ON PROPERTY MANAGEMENT PROBLEMS AT THE ROCKY FLATS PLANT (302150)

BACKGROUND : In 1994, we reported (GAO/RCED-94-77) that a substantial amount of DOE/Rocky Flats property was missing or unlocatable. We also identified other property management problems. Since the report's issuance, DOE decided to change contractors effective 7/1/95. Its unclear whether the contractor change will resolve Rocky Flats' property management problems.

KEY QUESTIONS : (Q1) What is the status of Rocky Flats property reported as missing or unlocatable in our 1994 report? (Q2) To what extent will property management problems be resolved (a) by the existing contractor, (b) by the future contractor, and (c) during contractor transition? (Q3) To what extent has DOE improved its oversight of property management?

TITLE: DOE'S ABILITY TO MAINTAIN NUCLEAR WEAPONS (302159)

BACKGROUND : Since 1990, DOE has drastically reduced the number of nuclear weapons in the stockpile, eliminated underground nuclear testing and closed weapons production facilities. Despite these changes, DOE is charged with maintaining safe and reliable nuclear weapons.

KEY QUESTIONS : (Q1) How did DOE establish quality assurance in general & how have world events changed it? (Q2) Are DOE's quality assurance activities on schedule & with what results? (Q3) What are DOE's capabilities to perform corrective procedures on weapons? (Q4) Is DOE's limited life components program on schedule, how many years supply exist & is the source reliable?

TITLE: REVIEW RESTRICTIONS ON DISPOSAL OF SURPLUS FEDERAL WEAPONS AND MILITARY-STYLE EQUIPMENT (302160)

MISSIONS & MANAGEMENT OF E&S AGENCIES

TITLE: DOE'S MANAGEMENT OF MAJOR SYSTEMS ACQUISITIONS (302163)

BACKGROUND : Since the 1980s, GAO has reported on problems with DOE's major systems acquisition (MSA) process. DOE has spent billions of dollars on projects and technologies that were never completed, failed to operate as intended, or experienced significant cost overruns and schedule changes.

KEY QUESTIONS : (1) What is the status of all (ongoing, completed and terminated) MSAs since 1980? (2) What systems does DOE have in place to manage MSAs? (3) What lessons learned or best practices from other government and/or private sector agencies can be incorporated into DOE's MSA management process to enhance the agency's ability to meet original performance goals?

TITLE: DEPARTMENT OF ENERGY: REVIEW OF THE SECRETARY OF ENERGY'S TRAVEL FUNDING (302165)

TITLE: SURVEY OF DOE'S VITRIFICATION START-UP PLANS (302166)

BACKGROUND : DOE's Defense Waste Processing Facility (DWPF) and the West Valley Demonstration Project (WVDP) are nearing start-up. These facilities are designed to convert highly radioactive nuclear waste into a more stable glass form through a process called vitrification. Estimates to complete vitrification of high-level waste at the two sites exceed \$10 billion.

KEY QUESTIONS : (Q1) What are the requirements for projects moving from construction and testing to startup, and have DWPF and WVDP complied? (Q2) Are there any unresolved technical issues remaining prior to the facilities beginning radioactive operations? (Q3) What are the implications of potential budget reductions on the cost and schedule of the two projects, including life cycle costs?

Energy and Science Issues

MISSIONS & MANAGEMENT OF E&S AGENCIES

TITLE: INFORMATION ON DOE OFFICE OF ENVIRONMENTAL MANAGEMENT'S EFFORTS TO REDUCE FUTURE PROGRAM COSTS. (302167)

TITLE: FINANCIAL AND OPERATING CONDITIONS OF PMAS (307335)

BACKGROUND : Seeking to reduce deficits and the scope of federal activities, legislative proposals and the administration's fiscal year 1996 budget request seek to privatize DOE's power marketing administrations (PMAs). Estimated budget savings range from \$3.7 to \$11.5 billion. Given this level of interest, GAO will examine the current financial and operating conditions of the PMAs.

KEY QUESTIONS : What are the current financial and operating conditions of the PMAs?

TITLE: HUMAN AND FINANCIAL RESOURCES USED IN ACCOMPLISHING THE MISSIONS OF THE DEPARTMENT OF ENERGY (308679)

BACKGROUND : Congress is considering moving, privatizing, or eliminating DOE missions. DOE has a reorganization plan that could be difficult to implement because it may not have complete budget and workforce information especially at the contractor and subcontractor level--the bulk of the workforce that accomplishes each of DOE's missions.

KEY QUESTIONS : 1.) What budget categories, programs, and functions make up DOE and how do these aggregate to missions? 2.) What human and financial resources are used to accomplish each of DOE's missions?

Energy and Science Issues

MISSIONS & MANAGEMENT OF E&S AGENCIES

TITLE: HRA 14: SURVEY OF DOE'S FFRDC MANAGEMENT FEES (308680)

TITLE: USE OF DOE'S SURPLUS REAL PROPERTY FOR ECONOMIC DEVELOPMENT (308681)

BACKGROUND : The decline in the production of nuclear weapons by the Department of Energy has resulted in surplus real property (land, buildings, and related equipment) at Energy. Energy is authorized to transfer surplus property to communities to mitigate the adverse impact on the local economies caused by the change in Energy's defense activities.

KEY QUESTIONS : 1.) How has Energy disposed of its surplus real property since fiscal year 1992, and how does it plan to dispose of surplus property in the future? 2.) What uses are being made of Energy's surplus real property? 3.) What are Energy's projected costs, savings and benefits, and are they supported?

TITLE: HRA 14: ANALYSIS OF DOE'S USE OF SUPPORT SERVICE CONTRACTORS (308682)

BACKGROUND : The House Committee on Appropriations has indicated that it expects DOE to reduce its use of certain types of support service contractors in FY 1996 by 50 percent. Baseline figures are needed to measure DOE's progress. Total DOE obligations to support service contractors totaled \$939 million in FY 1994.

KEY QUESTIONS : Q.1: What is the universe of support service contracts and what are the different purposes for which DOE uses these contractors? Q.2: What type of information is available from DOE's data bases, and can it be used to compile baseline data? Q.3: To what extent is there duplication from different offices contracting for similar services?

NUCLEAR WEAPONS/POWER

TITLE: RECURRENCES OF REPORTED EVENTS AT DOE SITES (302148)

BACKGROUND : DOE requires its managers and contractors to report, and take actions to prevent the recurrence of, events at DOE sites that could adversely affect facility operations, the environment, or the safety and health of workers or the public. However, reported events often recur, sometimes with significant adverse consequences.

KEY QUESTIONS : Q1. What are some types of reported events that have recurred at DOE sites and what adverse consequences have resulted? Q2. What issues influence DOE's effectiveness in using past experience to prevent recurrences of reported events?

TITLE: DOE ENVIRONMENTAL MANAGEMENT PROGRAM UNCOSTED BALANCES (302149)

BACKGROUND : The Subcommittee is reviewing DOE's Environmental Management (EM) program's FY 1996 budget request. They are concerned about how large an uncosted balance the EM program needs to operate. They asked GAO to review EM's FY 1995 cost experience to determine how large a balance they are likely to have at the end of FY 1995, and how large a balance EM needs for FY 1996.

KEY QUESTIONS : Q.1 How large an uncosted balance will EM have at the end of FY 1995? Q.2 How does this compare to the target balance they need to maintain the program?

TITLE: COST-EFFECTIVENESS OF DOE'S ENVIRONMENTAL TECHNOLOGY DEVELOPMENT PROGRAM (302151)

BACKGROUND : In many cases, DOE does not yet have methods to contain and clean up the extensive contamination at its nuclear weapons facilities. Also, new technologies are needed that are more cost-effective. DOE identified five focus areas with particular technology needs: mixed waste, radioactive tanks, contaminant plumes, landfills, and facility decontamination.

KEY QUESTIONS : (Q.1) How does DOE's Office of Environmental Management (EM) identify and prioritize needs and allocate funds to ensure that its most pressing technology development needs are addressed? (Q.2) What management controls does EM have for developing solicitations, selecting proposals, and re-assessing ongoing projects, in order to ensure a cost-effective program?

NUCLEAR WEAPONS/POWER

TITLE: SURVEY OF DOE'S USE OF EXPEDITED RESPONSE ACTIONS TO CLEAN-UP THE WEAPONS COMPLEX (302157)

BACKGROUND : Since 1989, DOE has spent about \$1 billion on environmental restoration at Hanford. However, only about \$250 million has been spent on actual clean-up while about \$750 million has been spent studying problems. One approach that DOE has adopted at Hanford to perform cleanups more quickly is the "Expedited Response Action" (ERA). DOE has initiated a dozen ERAs since 1989.

KEY QUESTIONS : Q.1 What has been the scope of the Environmental Restoration Program at Hanford? Q.2 What role have Expedited Response Actions played in the clean-up of Hanford? Q.3 What have been the costs and the results in reducing the risk to public health and safety of ERAs? Q.4 What is the potential for the use of ERAs across DOE?

TITLE: CHARACTERIZING HANFORD'S HIGH-LEVEL WASTE TANK FARMS (302161)

BACKGROUND : Disposing of Hanford's high-level waste could cost over \$50 billion. Over the past 10 years, DOE has been unable to characterize the high-level waste in Hanford's 177 underground tanks. As the first step in waste disposal, failure to resolve characterization problems could result in significant delays and increased costs for the tank waste remediation program

KEY QUESTIONS : Q.1 What progress has DOE made in characterizing Hanford's tank wastes? Q.2 What are the primary causes of slow characterization progress? Q.3 What actions should DOE take to address the program's technology and management problems?

ENERGY R&D

TITLE: RECOUPMENT OF FEDERAL COST-SHARE INVESTMENT IN SUCCESSFULLY COMMERCIALIZED TECHNOLOGIES (308889)

BACKGROUND : DOE shares in the costs of technology development and demonstration projects with industry under cost-sharing contracts, cooperative agreements, and Cooperative Research and Development Agreements (CRADAs). Some programs require that the federal investment be repayed if the technologies are commercialized, but most programs do not.

KEY QUESTIONS : Q1: To what extent does DOE require recoupment of its investment under cost-shared technology development and demonstration programs, including CRADAs? Q2: What are the similarities and differences in the concepts used by DOE to recoup its investment in commercialized technologies? Q3: What are the advantages and disadvantages of having or not having a recoupment policy?

BALANCING ENERGY SUPPLY AND DEMAND

TITLE: THE 1995 NATIONAL ENERGY POLICY PLAN (NEPP): ADDRESSING U.S. RELIANCE ON OIL IMPORTS (308887)

BACKGROUND : DOE is in the process of releasing its 1995 National Energy Policy Plan, as required by the DOE Organization Act. The Plan is required to project energy trends and related energy security, economic, environmental, and other impacts, and propose strategies for addressing such trends. The 1995 Plan specifically seeks to address the rising trend in U.S. oil-imports.

KEY QUESTIONS : (1) To what extent does the 1995 NEPP meet statutory requirements? (2) To what extent does the Plan address the pros and cons of rising U.S. reliance on oil in general, and imported oil in particular? (3) To what extent does the Plan provide strategies to address problems identified in Question 2; and to what extent is the Plan supported by sound analysis?

COMPETITION/SECURITY FOR ENERGY SUPPLIES

TITLE: REVIEW OF NRC'S INSPECTION PROGRAM (302122)

BACKGROUND : The NRC inspection program is designed to ensure that licensees such as the South Texas Project are designing, constructing, testing, and operating their nuclear power plants in a safe manner. The role of the resident inspector program is to determine how well the licensee is performing and to ensure the licensee corrects poor performance whenever identified.

KEY QUESTIONS : (Q.1) Has NRC's inspection program at South Texas Project identified weaknesses before they have become significant safety events? (Q.2) What factors, utility and/or NRC weaknesses, led to the forced shut down of this nuclear power plant? (Q.3) Has NRC resolved all allegations it has investigated concerning construction and operation of the plant?

TITLE: UNRESOLVED REGULATORY AND OPERATIONAL ISSUES AFFECTING DOE'S WASTE ISOLATION PILOT PLANT (302143)

BACKGROUND : The Waste Isolation Pilot Plant (WIPP) is a high priority item in DOE's weapons complex cleanup. DOE plans to open WIPP by mid-1998, but first must address many technical and operational issues raised by EPA and others. DOE's recent realignment of WIPP aims to accelerate the process to start disposal, but DOE's schedule builds in little time for resolving critical issues.

KEY QUESTIONS : Q1: What do DOE, EPA, and others believe are the critical scientific, regulatory and technical issues DOE must address to open WIPP? Q2: What do key stakeholders believe DOE needs to do to resolve these issues? Q3: To what extent have DOE and others acted to resolve these issues? Q4: What additional time, steps and resources may be needed to resolve the issues?

Energy and Science Issues

COMPETITION/SECURITY FOR ENERGY SUPPLIES

TITLE: BRIEFINGS AND OTHER ASSISTANCE TO THE HOUSE REPUBLICAN TASK FORCE ON THE DEPARTMENT OF ENERGY IN THE AREA OF REMOVING THE CIVILIAN RADIOACTIVE WASTE PROGRAM FROM DOE (302154)

BACKGROUND : The House Republican Task Force on DOE has proposed abolishing DOE. The civilian radioactive waste program is a critical piece of its work. It has contacted us concerning issues to be considered when making organizational structure decisions on the program. Numerous studies, over the last 13 years, have suggested making the program a single-mission entity outside government.

KEY QUESTIONS : (1) What information exists on alternative management structures for the civilian radioactive waste program? (2) What issues arise when structuring such an organization? (3) What issues are involved in selecting a funding mechanism for this program? (4) What issues are involved when considering a selection process for interim storage and disposal sites?

TITLE: STATE OF NEVADA'S USES OF FUNDS APPROPRIATED FROM THE NUCLEAR WASTE FUND (302168)

BACKGROUND : Nevada annually receives \$5-10 million from the Nuclear Waste Fund to oversee DOE's Yucca Mountain repository project. In 1990, GAO questioned the state's use of \$1 million of about \$30 million spent. New examples of apparent state violations of the restrictions placed on the state's use of these funds have been cited.

KEY QUESTIONS : Q1: Has Nevada engaged in activities prohibited by federal law? Q2: Does DOE have adequate controls in place to ensure that the state's expenditures of nuclear waste funds are appropriate? Q3: Has DOE recovered funds previously misspent by the state?

TITLE: ISSUES CONCERNING THE REMOVAL OF THE CIVILIAN RADIOACTIVE WASTE PROGRAM FROM THE DEPARTMENT OF ENERGY (302169)

COMPETITION/SECURITY FOR ENERGY SUPPLIES

TITLE: ELECTRIC VEHICLES: EFFORTS TO COMPLETE ADVANCED BATTERY DEVELOPMENT WILL REQUIRE MORE TIME AND FUNDING (308881)

BACKGROUND: A major obstacle to electric vehicle commercialization is the need for advanced batteries to provide satisfactory range, power, and recharging. In 1991, the U.S.-Advanced-Battery-Consortium (USABC) was formed between the automakers, electric utilities and DOE to fund advanced battery research. Planned funding was \$262 million over 4 years, with DOE paying 50 percent.

KEY QUESTIONS: (1) How has DOE overseen the activities of the USABC? (2) What is the rationale for establishing both mid-term and long-term performance and cost goals for advanced batteries? (3) What progress has been made in meeting the mid-term and long-term goals? (4) How much funding has the consortium spent, and how much more, if any, is needed?

TITLE: REVIEW OF DOMESTICALLY PRODUCED OXYGENATED FUELS IN GASOLINE (308888)

BACKGROUND: Given our growing dependence on imported oil, the U.S. is faced with policy challenges that balance energy security and environmental quality. Several strategies to consider to meet these challenges include the use of cleaner burning reformulated gasoline, the use of domestically produced oxygenates such as ethanol in reformulated gasoline, and the development and use of renewable fuels.

KEY QUESTIONS: (1) What is the cost effectiveness of using reformulated gasoline versus other air pollution controls? (2) What is the potential oil displacement from using oxygenates in gasoline? (3) What are the costs and benefits of using oxygenates versus aromatics? (4) What is known about the potential for ongoing biofuel technologies to reduce related biofuels production costs?

SCIENCE & TECHNOLOGY

TITLE: AN IMPACT ASSESMENT OF THE ADVANCED TECHNOLOGY PROGRAM (ATP) (307723)

BACKGROUND: NIST's Advanced Technology Program (ATP) funds companies' high-risk R&D solely to support their commercial success. ATP budgets are growing from \$200M in FY93 to a requested \$450M in FY94 and \$740M in FY97. Our most recent ATP work (suspended) reported that ATP evaluation activities have not provided credible evidence of impacts. This job will determine the impacts of ATP.

KEY QUESTIONS: For companies that applied to ATP: 1) has ATP had the impact of funding research that would have otherwise gone unfunded? 2) could the same objectives have been achieved without the use of federal funds, i.e., are federal funds redundant?

SCIENCE & TECHNOLOGY

TITLE: LESSONS LEARNED BY FIVE STATE CENTERS UNDER THE PILOT TECHNOLOGY ACCESS PROGRAM (TAPP) (307724)

BACKGROUND : The Pilot Technology Access Program (TAPP), authorized under PL 102-140, established centers in five states to encourage the transfer of technology to small businesses. Since the program will not be funded after FY 1995, Congress requested that we conduct a broad review of the experiences of and lessons learned by the five centers.

KEY QUESTIONS : (Q1) How effective is TAPP in encouraging the transfer of technology to small businesses? (Q2) What are the lessons learned by the five pilot centers that can be applied to other technology transfer programs?

TITLE: REVIEW OF THE SMALL BUSINESS TECHNOLOGY TRANSFER (STTR) PILOT PROGRAM (307732)

BACKGROUND : Small Business Technology Transfer (STTR) was established in 1993 to encourage joint R&D by small businesses and research institutions. Participating agencies make awards to small businesses, which must team up with a research institution. The program will sunset in October 1996 and will be up for reauthorization in mid-1996.

KEY QUESTIONS : (1) What is the quality of STTR research? (2) What is its commercial potential? (3) Have agencies developed procedures to avoid potential conflicts of interest involving federally funded R&D centers? (4) What is the effect, if any, of STTR on the Small Business Innovation Research program? (5) What is the effect, if any, of STTR on other agency R&D?

TITLE: CAPABILITIES, CONDITION AND RESOURCE REQUIREMENTS OF DOE LABORATORY FACILITIES (307733)

BACKGROUND : How best to restructure DOE's 30 labs to accommodate changes in national R&D priorities, yet maintain their capabilities, poses a significant challenge for DOE and the Congress. Critical to such a decision will be an assessment of lab conditions and capabilities, the cost of upgrades and new construction, and the funding outlook for lab research programs.

KEY QUESTIONS : 1) What is the current condition, staffing, and technical capabilities of DOE's labs? 2) What are the costs associated with planned upgrades of existing facilities and new construction required to maintain the labs? 3) How do DOE lab needs compare with facilities and R&D reductions in the FY '96 budget?

SCIENCE & TECHNOLOGY

TITLE: REVIEW OF THE PATENT EXAMINATION OPERATIONS OF THE PATENT AND TRADEMARK OFFICE (PTO) (307734)

SCIENCE & TECHNOLOGY POLICIES/PROGRAM

TITLE: SAFETY OF FSU NUCLEAR FACILITIES (170258)

BACKGROUND : The Senate will soon be asked to ratify an international nuclear safety convention that covers civilian nuclear power plants but not other nuclear facilities which pose various safety and health risks. Many of these other nuclear facilities--both military and civilian--operate in the former Soviet Union, where there is limited regulatory authority.

KEY QUESTIONS : (1) What are the major nuclear facilities--other than power plants--in the former Soviet Union? (2) Based on available information, what are the safety, health, and environmental hazards posed by these facilities? (3) What assistance efforts are underway or planned to address safety problems?

TITLE: FSU NUCLEAR MATERIAL CONTROLS (170262)

BACKGROUND : Concern is mounting that deteriorating economic and social conditions in the Former Soviet Union (FSU) could accelerate the proliferation of weapons of mass destruction and advanced conventional arms. Nonproliferation controls, such as export controls, material control and accountancy, either don't exist or many not have been effectively implemented.

KEY QUESTIONS : (1) What is the nature and extent of the nuclear material control problem in the FSU? (2) What is the status and prognosis of the U.S. programs to assist the FSU in strengthening nuclear controls? (3) How will proposed transfer of CTR portion of programs from DOD to DOE affect program implementation?

SCIENCE & TECHNOLOGY POLICIES/PROGRAM

TITLE: ASSESSMENT OF U.S.-EURATOM AGREEMENT ON NUCLEAR COOPERATION (170265)

BACKGROUND : The Agreement Between the U.S. and the European Atomic Energy Community Concerning Peaceful Uses of Atomic Energy (EURATOM Agreement) expires on 12/31/95. Negotiations on the new agreement have recently concluded. Under the Atomic Energy Act of 1954, as amended, the new agreement must meet specific nonproliferation requirements, and be considered by Congress.

KEY QUESTIONS : 1) Is the proposed U.S.-EURATOM Agreement consistent with the nonproliferation requirements under the Atomic Energy Act of 1954? 2) What is the extent of U.S. controls of U.S.-origin nuclear material, equipment, and alteration of nuclear material within EURATOM? 3) What are the limitations on U.S. suspension rights and impact on U.S. export licensing process?

OTHER ISSUE AREA WORK --ENERGY & SCIENCE

TITLE: URANIUM MILL TAILINGS PROGRAM (302136)

BACKGROUND : P.L. 95-604 directed DOE to cleanup 24 inactive processing sites by 1988. DOE expects to finish in 1998--2 years after its authority ends and at a cost of \$1.3 billion. DOE is initiating ground water cleanup which will take several years. NRC and EPA are also involved with the program.

KEY QUESTIONS : (1) Why has the program exceeded its estimated costs and time frames? (2) What could extend the program beyond its authorization date and DOE's est. costs? (3) Has the cleanup impacted human health? (4) What's the status of DOE's groundwater cleanup? (5) Are there any major differences between the Title I and II cleanup? (6) What post-UMTRA issues will DOE need to resolve?

TITLE: REVIEW OF THE UNITED STATES ENRICHMENT CORPORATION'S PRIVATIZATION PLAN (302146)

BACKGROUND : The Energy Policy Act of 1992 established the U.S. Enrichment Corporation and required it to develop a privatization plan by July 1995. The Act also requires GAO to review the plan and report to the Congress before the plan is implemented.

KEY QUESTIONS : Q.1 What undue costs and ongoing liabilities would the government assume as the result of USEC's privatization plan? Q.2 Will USEC's privatization plan return at least the net present value of the corporation to the government?

OTHER ISSUE AREA WORK --ENERGY & SCIENCE

TITLE: CONSIDERATION OF CARRY-OVER BALANCES IN DOE'S BUDGET DEVELOPMENT PROCESS (302152)

BACKGROUND : In the last four years GAO has reviewed the Department of Energy's (DOE) carry-over balances and identified about \$500 million per year in offsets to DOE's budget. However, DOE still maintains carry-over balances of over \$10 billion, an amount equal to half of its \$20 billion annual budget. It is not clear that DOE fully uses its carry-over balances to offset budget needs.

KEY QUESTIONS : (Q.1) What process does DOE use to identify carry-over balances that are available to offset its budget request? (Q.2) How are the results of this process used in the budget formulation process? (Q.3) How can DOE's process for evaluating carry-over balances be improved to ensure that the balances are the minimum needed to meet program requirements?



