

DOCUMENT RESUME

05056 - [B0735662]

**Reporting of Nuclear Weapons Projects Can Be Improved.
PSAD-78-80; B-165546. March 10, 1978. 6 pp. + appendix (1 pp.).**

**Report to Secretary, Department of Energy; by Monte Canfield,
Jr., Director, Energy and Minerals Div.**

**Issue Area: Federal Procurement of Goods and Services: Notifying
the Congress of Status of Important Procurement Programs
(1905); Science and Technology: Management and Oversight of
Programs (2004).**

Contact: Energy and Minerals Div.

**Budget Function: National Defense: Atomic Energy Defense
Activities (053).**

**Congressional Relevance: House Committee on Armed Services;
Senate Committee on Armed Services.**

The need for comprehensive periodic status reports on the Department of Energy's weapons projects is pointed out. In relation to such reports, discussions are presented of the Department of Energy's Nuclear Weapons Program, weapons information, and congressional information needs. Recommendations are made as to the content of the needed semiannual, comprehensive status report, including: program description, mission, and relationship to the Department of Defense delivery system(s); a program highlights section; original cost, schedule, and performance estimates (baseline); cost, schedule, and performance progress information to date; estimates to complete; and a variance analysis to explain major changes. (DB)

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REPORT BY THE U.S.

General Accounting Office

Reporting Of Nuclear Weapons Projects Can Be Improved

The Department of Energy's cost to carry out its responsibilities for designing, developing, testing, and producing nuclear weapons to meet military needs exceeds one billion dollars annually.

The Department of Energy should submit to the Congress more complete information on nuclear weapons projects to provide a better means of assessing overall progress and to aid in making decisions on the future of the projects.





UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

ENERGY AND MINERALS
DIVISION

B-165546

The Honorable
The Secretary of Energy

Dear Mr. Secretary:

The cost of military products, including nuclear weapons, 1/ is increasing steadily. This cost is forcing agency management and the Congress to determine the most needed weapons systems and ways to acquire them within fiscal constraints. To help make these decisions complete, accurate, and timely, information on the status of the weapons projects is essential. Cost to carry out the Department of Energy (DOE) responsibilities for designing, developing, testing, and producing nuclear weapons exceeds a billion dollars annually.

DOE presently provides the Congress information on its nuclear weapons projects through testimony, submission of budget estimates, various periodic reports, and briefings. Comprehensive periodic status reports on DOE weapons projects, however, are not provided.

The Congress has recognized the need for status reports on other Federal agency acquisition projects. Status reports are standard, comprehensive summary reports which provide current estimates of technical, schedule, quantity, and cost information in comparison with planning or development estimates of major programs. The reports briefly summarize significant program developments. They also focus on major events and the implications of changes that occur. They provide the agency's assessment of current system mission requirements and they identify inadequacies of system objectives. The reports also provide a variance analysis explaining planning, development, and current estimate changes.

DOE NUCLEAR WEAPONS PROGRAM

The development and production of nuclear weapons is a national program involving both Department of Defense (DOD)

1/Nuclear weapons as used in this report means a bomb, war-head, or an atomic demolition munition, excluding the DOD delivery system.

and DOE efforts. Close cooperation and coordination between these departments is required. Weapons production levels established jointly by DOD and DOE to meet the military needs are approved annually by the President.

Within DOE the Assistant Secretary for Defense Programs, through the Division of Military Application (DMA), provides major program guidance and direction, including the funding of program activities. The DOE Assistant Secretary also determines levels of effort and priorities for the nuclear weapons program. Responsibility for managing weapons production is delegated to the Albuquerque operations office (ALO). Under broad directives received from DMA, ALO plans and directs weapons production levels and schedules at seven Government-owned, contractor-operated plants. 1/

Under DMA guidance, three laboratories 1/ are responsible for the nuclear weapons research and development programs. The Nevada test site is the sole test area for underground nuclear experiments and is managed by the DMA Nevada operations office. Laboratory and production contractors are provided continuity through multiyear negotiated, fixed-fee contracts and are given considerable flexibility in directing their daily operations.

Individual nuclear weapons projects can take 9 years or longer to develop and produce. The weapons produced can vary significantly from original design, cost, schedule, performance, and quantity estimates. The total estimated life-cycle cost of those nuclear weapons presently in the engineering development phase exceeds \$7 billion.

WEAPONL INFORMATION

DOE laboratories and production plants prepare a myriad of nuclear weapon project reports. None of these reports, however, contain comprehensive information on weapons systems costs, schedules, and performance data, compared to original baseline data. During our review, we found that DOE has the necessary information, in various forms, for status report preparation for nuclear weapons projects.

1/See app. I.

Internal planned status reporting

In the past, management emphasis within the nuclear weapon complex was placed on meeting required DOD production schedules with highly reliable weapons. Cost considerations played a minor role in daily decisionmaking. In the mid-1970s, however, DOE management began to formally recognize that cost must be given a high priority along with performance, reliability, safety, and scheduling if U.S. nuclear weapons requirements are to be met.

In January 1976, DOE completed a study concerning transferring DOE military applications and restricted data functions to DOD or other Federal agencies. As part of this study, DOE made an Effectiveness Responsiveness Review, addressing a number of issue areas that resulted in nine action proposals. Several proposals were directed toward nuclear weapons complex cost management. As a result, DOE is initiating an annual weapons status report for its internal management. DMA anticipates that the first report for one nuclear weapons project will be completed about July 1978.

The annual report is to compare, by individual weapon, current cost, schedule, and technical performance data with baseline estimates. Significant variances between baseline data and current data will be explained.

The comprehensive report is to be prepared by ALO and submitted to DMA annually -- more frequently if major changes occur. ALO officials and one DMA official told us that the annual report would have the basic information needed to prepare a status report for the Congress. ALO officials also stated that a midyear schedule and performance update to the annual report could be provided DMA. They said it would be difficult to update midyear cost data, however, because ALO presently makes budget estimates only once a year.

CONGRESSIONAL INFORMATION NEEDS--STATUS REPORTS

The Congress needs complete and accurate information on the justification and status of projects it authorizes and funds. During the assignment we discussed with staff members of the House and Senate Armed Services and Appropriations Committees, the potential benefits to be realized by the Congress from receiving nuclear weapon projects status reports. The Committee staff members are interested in receiving these types of comprehensive status reports.

Examples of Federal agencies currently providing status reports to the Congress on major Federal acquisitions follow.

- The Department of Defense provides quarterly reports on selected major weapons systems.
- The National Aeronautics and Space Administration provides project status reports on selected space systems.
- The Department of Energy provides status reports for major reactor research and development projects and programs.

Reports we have issued to the Congress on status reporting needs for other Federal agencies follow.

- "How To Improve the Selected Acquisition Reporting System," Department of Defense, PSAD-77-63, March 27, 1975.
- "Reporting of Selected Major Civil Projects Needs Improvement," Office of Management and Budget and Other Federal Agencies, PSAD-77-5, December 29, 1975.
- "Improved Reporting Needed on National Aeronautics and Space Administration Projects," PSAD-77-54, January 27, 1977.

CONCLUSIONS AND RECOMMENDATIONS

The Department provides the Congress information on its nuclear weapons projects through testimony, submission of budget estimates, various periodic reports, and briefings. Presently, the Department does not regularly provide the Congress comprehensive status reports for individual nuclear weapons projects showing the current project status as compared to initial project milestones. The Congress has recognized the utility of status reports on other major acquisition projects of Federal agencies.

We found nuclear weapons projects to be exemplary examples of where to apply the status reporting concept. DOE has the basic required information, by individual weapons systems, for periodic status report preparation. The projects are of high national security importance, and are costly. The projects take several years to acquire, and must be closely coordinated with another department's programs.

DOE's status report preparation by weapons project for internal use supports this conclusion. DOE has recognized the need to baseline the projects and to track progress in achieving the established goals.

Status reports would provide the Congress improved visibility over the weapons projects concerning project cost, schedule, and technical performance. The Congress could use these reports to assess DOE progress in meeting DOD weapon priorities as well as being alerted to any interface issues existing between the two departments. Each committee involved with the oversight responsibility for the DOE weapons complex would have uniform, timely, and accurate project status information. Decisionmakers could more readily understand the changes made to projects. Status reporting should also assist DOE in meeting its responsibility to keep the Congress informed on nuclear weapon activities.

We recommend that the Department of Energy provide semi-annual, comprehensive status reports on individual nuclear weapons projects to the Senate and House legislative and appropriations committees and appropriate subcommittees. Reports should be prepared for nuclear weapons projects from the time research begins, in response to a formal Department of Defense request, and continue through production.

We believe that as a minimum these reports should contain

- program description, mission, and relationship to the Department of Defense delivery system(s);
- a program highlights section;
- original cost, schedule, and performance estimates (baseline);
- cost, schedule, and performance progress information to date;
- estimates to complete; and
- a variance analysis to explain major changes.

AGENCY COMMENTS

Agency officials agree that program information reporting is essential to insure that the Congress is kept fully

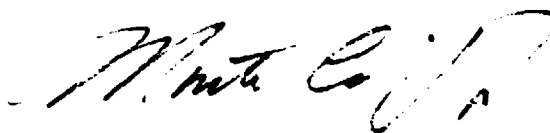
and currently informed. They believe, however, that the reporting techniques presently used for this purpose are sufficient.

We are sending copies of this report to the Acting Director, Office of Management and Budget. We are also sending copies to the Chairmen of the House and Senate Committees on Appropriations and Armed Services; the House Committee on Government Operations; and the Senate Committee on Governmental Affairs.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We appreciate the courtesy and cooperation extended to our staff during this review and would appreciate being informed of the actions you take on our recommendations.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Monte Canfield, Jr.", written in a cursive style.

Monte Canfield, Jr.
Director

WEAPONS FACILITIES

<u>Facility and location</u>	<u>Contractor</u>	FY 1977 operating costs-- weapons (note a) (millions)
Research and development labs:		
Lawrence Livermore Laboratory Livermore, California	University of California	\$125.3
Los Alamos Scientific Laboratory Los Alamos, New Mexico	University of California	100.7
Sandia Laboratories Albuquerque, New Mexico Livermore, California	Western Electric Company	219.7
Production facilities:		
Rocky Flats Plant Golden, Colorado	Rockwell Interna- tional	55.7
Kansas City, Plant Kansas City, Missouri	Bendix Corporation	97.2
Savannah River Plant: Aiken, South Carolina	E. I. du Pont de Nemours and Com- pany	15.8
Pinellas Plant Clearwater, Florida	General Electric Corporation	27.6
Pantex Plant Amarillo, Texas	Mason and Hanger- Silas Mason	36.4
Mound Laboratory Miamisburg, Ohio	Monsanto Research Corporation	35.7
Y-12 Plant Oak Ridge, Tennessee	Union Carbide Cor- poration	70.7
Testing facility Nevada Test Site	Reynolds Electrical & Engineering Co.; EG and G, Inc.; Holmes and Narver, Inc.	<u>135.7</u>
Total		<u>\$918.5</u>

a/Includes weapon research and development testing, and production.