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[June 1976]

URANIUM ENRICHMENT

BRIEFING MATERIAL FOR RON NESSEN:

TAB

Background materials issued when the President submitted his proposal to Congress on June 26, 1976:

- A - Message to Congress
- B - Remarks on Signing
- C - Summary Fact Sheet
- D - Detailed Fact Sheet
- E - May 15 decision paper on bill reported by the Joint Committee on Atomic Energy (JCAE) on May 14.
- F - Draft Statement given to the President and which he modified and then used in Ohio
- G - President's Statement in Ohio.
- H - SUGGESTED Q&As

Notes:

- . The basic strategy in responding should be to keep attention focused on the need for the Congress to pass quickly the bill reported by JCAE. This bill is critical to the whole program, including the work necessary for a Portsmouth add-on plant.
- . The gut questions from informed people will be:

- Are you really committed to build the Portsmouth addition?

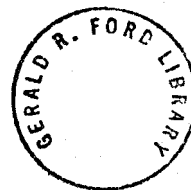
In summary, answer should be:

Need Congressional action of NFAA first; President will move to implement the bill as soon as it passes.

- Will the Government reopen its order book?

In summary, answer should be:

Four private groups are already talking with prospective customers, so the "order book" is already open to domestic and foreign customers. President pledged last June that Government would be sure that uranium enrichment services will be available to those customers when needed; that services would be supplied by the Government from national stockpile if private plants aren't producing when services are needed. The Portsmouth add-on plant would help provide capacity to back up this commitment.



TAB A



June 26, 1975

Office of the White House Press Secretary

THE WHITE HOUSE

TO THE CONGRESS OF THE UNITED STATES:

Every so often, a Nation finds itself at a crossroads. Sometimes, it is fortunate and recognizes it has a choice. Sometimes, it does not.

We are at such a crossroads in America today.

The course we select will touch the lives of most of us before the end of this century and surely affect the lives of generations of Americans yet to come.

Today, I am asking the Congress to join me in embarking this Nation on an exciting new course which will help assure the energy independence we seek and a significantly strengthened economy at the same time.

I am referring to the establishment of an entirely new private industry in America to provide the fuel for nuclear power reactors -- the energy resource of the future. I am referring to uranium enrichment which is presently a Federal Government monopoly.

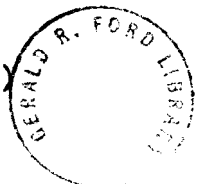
Without question, our energy future will become more reliant on nuclear energy as the supplies of oil and natural gas diminish.

The questions we must answer are (1) whether the major capital requirements for constructing new uranium enrichment facilities will be paid for by the Federal taxpayer or by private enterprise, and (2) whether a major new and expanding segment of our economy will be under the control of the Federal Government or the private sector.

The private sector has already demonstrated its capability to build and operate uranium enrichment facilities under contracts with the Federal Government. Since it is also willing to provide the capital needed to construct new

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uranium enrichment plants, I am asking the Congress to enact legislation to enable American industry -- with all its financial resources, management capability and technical ingenuity -- to provide the enriched uranium needed to fuel nuclear power plants.

I believe this is the proper and correct course for America to take. The alternative is continued Federal monopoly of this service at a cost to the taxpayers of at least \$30 billion over the next 15 years.

The enrichment of uranium -- which means, in brief, separating the fissionable U-235 in uranium from non-fissionable parts to provide a more potent mixture to fuel nuclear reactors -- is an essential step in nuclear power production.

For more than twenty years, the United States Government has supplied the enrichment services for every nuclear reactor in America and for many others throughout the world. Our leadership in this important field has enabled other nations to enjoy the benefits of nuclear power under secure and prudent conditions. At the same time, this effort has been helpful in persuading other nations to accept international safeguards and forego development of nuclear weapons. In addition, the sale of our enrichment services in foreign countries has returned hundreds of millions of dollars to the United States.

These enrichment services have been provided by plants -- owned by the Government and operated by private industry -- in Oak Ridge, Tennessee, Portsmouth, Ohio, and Paducah, Kentucky. A \$1-billion improvement program is now underway to increase the production capacity of these plants by 60 percent. But this expanded capacity cannot meet the anticipated needs of the next 25 years.

The United States is now committed to supply the fuel needs for several hundred nuclear power plants scheduled to begin operation by the early 1980's. Since mid-1974, we have been unable to accept new orders for enriched uranium because our plant capacity -- including the \$1-billion improvement -- is fully committed.

In short, further increases in enrichment capacity depend on construction of additional plants, with seven or eight years required for each plant to become fully operational.

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Clearly, decisions must be made and actions taken today if we are to insure an adequate supply of enriched uranium for the nuclear power needs of the future and if we are to retain our position as a major supplier of enriched uranium to the world.

It is my opinion that American private enterprise is best suited to meet those needs. Already, private industry has demonstrated its willingness to pursue the major responsibilities involved in this effort. With proper licensing, safeguards, cooperation and limited assurances from the Federal Government, the private sector can do the job effectively and efficiently -- and at enormous savings to the American taxpayer. In this way, direct public benefits will be provided on a long-term basis by private capital, not by taxpayers.

Accordingly, I am proposing legislation to the Congress to authorize Government assurances necessary for private enterprise to enter into this vital field.

A number of compelling reasons argue for private ownership, as well as operation, of uranium enrichment plants. The market for nuclear fuel is predominantly in the private sector. The process of uranium enrichment is clearly industrial in nature.

The uranium enrichment process has the making of a new industry for the private sector in much the same tradition as the process for synthetic rubber -- with early Government development eventually being replaced by private enterprise.

One of the strengths of America's free enterprise system is its ability to respond to unusual challenges and opportunities with ingenuity, vigor and flexibility. A significant opportunity may be in store for many firms -- old and new -- to participate in the growth of the uranium enrichment industry. Just as coal and fuel oil are supplied to electric utilities by private firms on a competitive basis, enriched uranium should be supplied to them in the same fashion in the future.

The energy consumer also stands to benefit. The production of nuclear power now costs between 25 and 50 percent less than electricity produced from fossil fuels. It is not vulnerable to the supply whims or unwarranted price decrees of foreign energy suppliers. And based on the past fifteen years of experience, commercial nuclear power has an unparalleled record of safe operation.

The key technology of the uranium enrichment process is secret and will remain subject to continued classification, safeguards and export controls.

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But for several years, a number of qualified American companies have been granted access to the Government's technology under carefully controlled conditions to enable them to assess the commercial potential for private enriching plants.

The Government-owned gaseous diffusion enriching plants have run reliably and with ever-improving efficiency for more than a quarter of a century. One private group has chosen this well-demonstrated process as part of its \$3.5 billion proposal to build an enrichment plant serving 90 nuclear reactors here and abroad in the 1980's. Others are studying the potential of the newer gas centrifuge process. Though not yet in large-scale operation, the centrifuge process -- which uses much less power than the older process -- is almost ready for commercial application.

I believe we must move forward with both technologies and encourage competitive private entry into the enrichment business with both methods. A private gaseous diffusion plant should be built first to provide the most urgently needed increase in capacity, but we should proceed simultaneously with commercial development of the centrifuge process.

With this comprehensive approach, the United States can reopen its uranium enrichment "order book," reassert its supremacy as the world's major supplier of enriched uranium, and develop a strong private enrichment industry to help bolster the national economy.

For a number of reasons, a certain amount of governmental involvement is necessary to make private entry into the uranium enrichment industry successful.

The initial investment requirements for such massive projects are huge. The technology involved is presently owned by the Government. There are safeguards that must be rigidly enforced. The Government has a responsibility to help ensure that these private ventures perform as expected, providing timely and reliable service to both domestic and foreign customers.

Under the legislation I am proposing today, the Energy Research and Development Administration would be authorized to negotiate and enter into contracts with private groups interested in building, owning and operating a gaseous diffusion uranium enrichment plant.

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ERDA would also be authorized to negotiate for construction of several centrifuge enrichment plants when more definitive proposals for such projects are made by the private sector.

Contract authority in the amount of \$8 billion will be needed, but we expect almost no actual Government expenditures to be involved. In fact, the creation of a private enrichment industry will generate substantial revenues for the United States Treasury through payment of Federal income taxes and compensation for use of Government-owned technology.

Under the proposed arrangements, there will be an opportunity for foreign investment in these plants, although the plants will remain firmly under U.S. control. There will be no sharing of U.S. technology and, there will be limitations on the amount of capacity each plant can commit to foreign customers.

In addition, all exports of plant products will continue to be made pursuant to Governmental Agreements for Cooperation with other Nations. All will be subject to appropriate safeguards to preclude use for other than agreed peaceful purposes.

Foreign investors and customers would not have access to sensitive classified technology. Proposals from American enrichers to share technology would be evaluated separately, and would be subject to careful Government review and approval.

Finally, the plants proposed will be designed and built to produce low enriched fuel which is suitable only for commercial power reactors -- not for nuclear explosives.

In the remote event that a proposed private venture did not succeed, this legislation would enable the Government to take actions necessary to assure that plants will be brought on line in time to supply domestic and foreign customers when uranium enrichment services are needed.

I have instructed the Energy Research and Development Administration to implement backup contingency measures, including continuation of conceptual design activities, research and development, and technology assistance to the private sector on a cost-recovery basis.

ERDA would also be able to purchase from a private firm design work on components that could be used in a Government plant in the unlikely event that a venture fails.

Finally, I pledge to all customers -- domestic and foreign -- who place orders with our private suppliers that the United States Government will guarantee that these orders

are filled as needed. Those who are first in line with our private sources will be first in line to receive supplies under this assurance. All contracted obligations will be honored.

I also pledge that cooperative agreements made with private firms under the proposed new authority will fully reflect the public interest. In fact, all contracts will be placed before the Congress in advance of their effectiveness. The Congress will have full and complete review of each one.

In sum, the program I am proposing will take maximum advantage of the strength and resourcefulness of industry and Government.

It will reinforce the world leadership we now enjoy in uranium enrichment technology. It will help insure the continued availability of reliable energy for America. It will move America one big step nearer energy independence.

Although the development of a competitive nuclear fuel industry is an important part of our overall energy strategy, we must continue our efforts to conserve the more traditional energy resources on which we have relied for generations. And we must accelerate our exploration of new sources of energy for the future -- including solar power, the harnessing of nuclear fusion and development of nuclear breeder reactors which are safe, environmentally sound and reliable.

I ask the Congress for early authorization of this program.

GERALD R. FORD

THE WHITE HOUSE,

June 26, 1975.

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TAB B

JUNE 26, 1975

OFFICE OF THE WHITE HOUSE PRESS SECRETARY

THE WHITE HOUSE

REMARKS OF THE PRESIDENT
UPON SIGNING
THE URANIUM ENRICHMENT MESSAGE

THE CABINET ROOM

11:23 A.M. EDT

I will read a statement before signing the message or messages that will go to the Congress.

Because our oil and natural gas resources are fast being depleted, we must rely more and more on nuclear power as a major source of energy for the future.

Today, I am asking the Congress to join me in embarking the Nation on an exciting new course of action which will help to assure the energy independence that we need, and significantly strengthen our economy at home, at the same time.

I am referring to the establishment of an entirely new competitive industry to provide uranium enrichment service for nuclear power reactors. The legislation that I am seeking will reinforce the world leadership we now enjoy in uranium enrichment technology.

It will help insure the continued availability of reliable energy for America. It will move America one big step nearer energy independence.

This legislation will insure that the billions of dollars required for the construction of new enrichment plants will be borne by the private sector, not by the American taxpayer.

But all of us will benefit directly from the service which private enterprise will provide.

I urge the Congress to act swiftly and favorably on this important new energy initiative. With this comprehensive approach, the United States can reopen its uranium enrichment order book, reassert its supremacy as the world's major supplier of enriched uranium, and develop a strong private enrichment industry to help bolster the national economy.

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So it is with pleasure and hope that I sign the message to go to both the House and the Senate, and ask the Congress to move as rapidly as possible in order that we can achieve the objectives which are so important.

Thank you very much.

END

(AT 11:25 A.M. EDT)



TAB C

June 26, 1975

Office of the White House Press Secretary

THE WHITE HOUSE

SUMMARY FACT SHEET

THE PRESIDENT'S PLAN FOR A COMPETITIVE
NUCLEAR FUEL INDUSTRY

The President's Action

The President today announced administrative actions and a legislative proposal to:

- . Increase the United States' capacity to produce enriched uranium to fuel domestic and foreign nuclear power plants.
- . Retain U.S. leadership as a world supplier of uranium enrichment services and technology for the peaceful uses of nuclear power.
- . Assure the creation, under appropriate controls of a private, competitive uranium enrichment industry in the U.S. -- ending the current Government monopoly.
- . Accomplish these objectives with little or no cost to taxpayers and with all necessary controls and safeguards.

Background

- . The U.S. capacity for refining or "enriching" uranium to make fuel for nuclear electric generating plants is now fully committed.
- . Work on constructing new capacity must begin soon so that plants will be ready to meet domestic and foreign requirements by about 1983.
- . Efforts to encourage the creation of a competitive uranium enrichment industry have shown that certain forms of Government cooperation and temporary assurances are necessary to permit private firms to enter the industry.

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The need for added capacity provides the opportunity for specific actions by the Government to encourage private entry.

Highlights of the Plan

The President's plan includes:

- . A legislative proposal, the Nuclear Fuel Assurance Act of 1975, which would authorize the Government to enter into certain cooperative arrangements with private industrial firms that wish to finance, build, own and operate plants to provide uranium enrichment services.
- . A pledge by the President to foreign and domestic customers that the Government will assure that orders placed with private producers will be fulfilled as services are needed.
- . Opportunities for foreign investment, with control of these plants remaining in U.S. hands.
- . All necessary controls and safeguards concerned with (a) preventing the diversion of nuclear materials and the spread of sensitive technology, (b) environmental impact, (c) safety, and (d) antitrust.

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TAB D

Office of the White House Press Secretary

THE WHITE HOUSE

FACT SHEET

THE PRESIDENT'S PLAN FOR A
COMPETITIVE NUCLEAR FUEL INDUSTRY

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- Centrifuge Enriching Projects - Request for Proposals

Other Actions Related to Uranium Enrichment

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- Contract Relief for Current ERDA Enrichment Customers
- ERDA Conditional Contracts for Enrichment Services

Attachment:

- #1 - Summary of UEA Plan and Proposal to ERDA 16
- #2 - Uranium Enrichment as a Part of the Nuclear Fuel Cycle 20

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THE PRESIDENT'S ANNOUNCEMENT

The President today announced administrative actions and a legislative proposal to (a) increase the United States' capacity to produce enriched uranium in order to meet the needs of domestic and foreign nuclear power plants, (b) retain U.S. leadership as a world supplier of uranium enrichment services and nuclear power plants, (c) assure the creation, under appropriate controls of a private, competitive uranium enrichment industry in the U.S. -- ending the current Government monopoly; and (d) accomplish these objectives with little or no cost to taxpayers and with all necessary controls and safeguards.

BACKGROUND

- . Natural uranium from U.S. and foreign mines must be refined or "enriched" before it can be used to make fuel for nuclear power plants which are used in the United States and in many foreign nations to generate electricity.
- . U.S. capacity for enriching uranium which now supplies all domestic and most foreign needs, consists of three Government-owned plants, located at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio.
- . Since mid-1974, the entire capacity of the three plants has been fully committed under long-term contracts. New enrichment capacity must be on "on-line" beginning in about 1983 to meet the growing domestic and foreign demand for nuclear fuel.
- . The potential U.S. market abroad has begun to erode as some potential foreign customers have started looking to sources such as the U.S.S.R., France and a West European consortium for uranium enrichment.
- . Since 1971, the Executive Branch has followed policies and programs directed toward assuring that private industry -- rather than the Federal Government -- builds the next increments of U.S. uranium enrichment capacity.

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Several industrial firms have sought to enter the uranium enrichment field but all have found that some forms of Government cooperation and temporary assurances are needed to overcome the initial obstacles to private industry involvement.

THE PLAN

Objectives. The plan announced by the President is designed to meet the objectives of assuring that:

- . The next increments of U.S. uranium enrichment capacity will be available when needed to meet the growing demand for fuel for nuclear powered generating plants in the U.S. and in other nations.
- . The U.S. maintains its leadership role in enrichment technology and its role as a major world supplier of uranium enrichment services and nuclear power plants -- a role that is important to:
 - Our economy and our world trade position.
 - Our efforts to obtain the commitment of additional nations to accept international safeguards and the principle of nuclear non-proliferation.
 - Our cooperation with other major oil consuming nations which are looking to nuclear power to help reduce their dependence on foreign oil imports.
 - Our longer range goal of developing technology and energy resources to supply a significant share of the free world's energy needs.
- . All future increments of capacity will be built, financed and operated by private industry -- rather than by the Federal Government -- so that a competitive industry will exist at the earliest possible date.
- . There will be little or no cost to the taxpayer and that the Government will receive increased revenue in corporate taxes and compensation for the use of its inventions and discoveries.
- . All necessary domestic and international controls over nuclear materials and classified technology will be maintained, as they would be if the Government were to own the new plants.

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Principal Elements of the Plan.

. Legislative Authority for Cooperative Arrangements with Private Firms. The President is asking the Congress to enact promptly the Nuclear Fuel Assurance Act to provide the additional legislative authority needed to enable the Energy Research and Development Administration (ERDA) to negotiate and enter into cooperative arrangements with private industrial organizations that wish to build, own and operate uranium enrichment plants.

- Negotiations would be directed toward the arrangements most advantageous to the Government and the public interest and with a degree of risk to the private firm that is consistent with the objective of creating a private, competitive uranium enrichment industry.
- These arrangements would provide for certain forms of Government cooperation and temporary assurances found to be necessary after detailed negotiations with firms submitting proposals. Arrangements could include:
 - . Supplying and warranting Government-owned inventions and discoveries in enrichment technology -- for which the Government will be paid.
 - . Selling certain materials and supplies on a full cost recovery basis which are available only from the Federal Government.
 - . Buying enriching services from private producers or selling enriching services to producers from the Government stockpile to accommodate plant start-up and loading problems.
 - . Assuring the delivery of uranium enrichment services to customers which have placed orders with private enrichment firms.
 - . Assuming the assets and liabilities (including debt) of a private uranium enrichment project if the venture threatened to fail -- at the call of the private venture or the Government, and with compensation to domestic investors in the private ventures ranging from full reimbursement to total loss of equity interest, depending upon the circumstances leading to the threat of failure.

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- The arrangements would be spelled out in a detailed contract, and the basis for arrangements would be subject to Congressional review.
- It is intended that any undertaking by the Government to acquire assets or interest and to assume liabilities of a private venture would end after approximately one full year of commercial operation of a plant. The precise period would be determined in the negotiation of definitive agreements.
- The Government would monitor progress carefully so that it can be sure that the plant will function properly and will be completed on time and within cost estimates.

Assurances for Customers. The President announced his pledge to domestic and foreign customers who place orders with private U.S. suppliers that the Government will assure that orders will be filled as services are needed. Those first in line with private suppliers will be first in line to receive services from the Government -- if it were necessary for the Government to take over and complete a private project.

Controls and Safeguards. The President announced that all necessary controls and safeguards will be maintained in all arrangements with private firms. Such controls and safeguards include:

- Preventing the Diversion of Nuclear Materials or Un-Controlled Spread of Sensitive Technology. All necessary measures will be taken to safeguard the use of the products of plants and to protect sensitive classified technology. These measures include:
 - . Effective domestic safeguards and physical security measures to the plants and their products.
 - . Continued requirements that exports take place pursuant to appropriate international agreements for cooperation and be subjected to safeguards to prevent diversions.

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- Continued classification and protection of sensitive enrichment technology.

Foreign Investment. Foreign investment in private enrichment ventures will be encouraged, but control will remain, as required by law, with U.S. interests. Foreign investors would not require or have access to classified information. Any proposals for sharing technology would be considered separately and would be subject to Governmental review and approval.

Environmental Impact, Safety and Anti-Trust. Private ventures wishing to build plants will have to obtain from the Nuclear Regulatory Commission (NRC) a construction permit and operating license. As a part of its review, the NRC must evaluate environmental, safety and anti-trust considerations as well as assure that control of the proposed new ventures remain in the U.S. -- as now required by the Atomic Energy Act. NRC also will have responsibility for assuring that the plants are appropriately safeguarded. The Justice Department participates in the review of anti-trust considerations.

IMPLEMENTING ACTIONS

The President announced several administrative actions that are being taken now:

- Negotiations for a Diffusion Plant. ERDA is responding formally to a proposal from the Uranium Enrichment Associates (UEA) offering to enter into negotiations which could lead to the construction by UEA of a \$3.5 billion (1976 dollars) plant which would make use of gaseous diffusion technology and which would be on line by about 1983.
- Request for Proposal for Centrifuge Plants. ERDA is issuing today a new request for proposals from industrial firms interested in constructing, owning and operating enrichment facilities making use of centrifuge technology.
- Environmental Impact Statement. ERDA will on June 30 issue for public review and comment a draft environmental impact statement concerned with the expansion of uranium enrichment capacity to be attained through ERDA's implementation of this action.

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- Contingency Planning. ERDA will continue with backup contingency measures to assure that capacity will be ready in the unlikely event that industrial efforts falter. These measures include continuation of Government conceptual design activities, research and development on enrichment technologies, and technological assistance to the private sector on a cost recovery basis.

- Diffusion Plant Design Work. ERDA plans to purchase from UEA design work on components for the private diffusion plant that could be used in a Government plant -- if the private venture were unable to proceed.

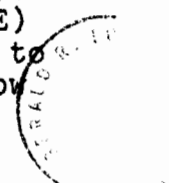
SPECIFICS OF THE LEGISLATIVE PROPOSAL

Authorizing legislation. The basic enabling legislation proposed today by the President would:

- Authorize Cooperative Agreements.

- It would permit ERDA to negotiate and enter into cooperative arrangements with firms wishing to build, own and operate uranium enrichment facilities.
- It would provide authorization for contract authority for amounts up to \$8 billion as may be approved in an appropriation act -- which is an estimate of the total potential cost to the Government in the unexpected event that all Government assured diffusion and centrifuge ventures were to fail, and it was then necessary for the Government to assume assets and liabilities of these ventures, take over plants, and compensate domestic investors. The Administration's expectation is that none of these funds would have to be appropriated or expended for the assumption of private ventures, but the authorization is necessary to provide assurance to customers and to potential producers of the Federal Government's commitment to create a competitive industry.

- Provide for Congressional Review. Once contracts were negotiated the Joint Committee on Atomic Energy (JCAE) would be notified and a period of 45 days would have to elapse before a contract would be executed -- to allow an opportunity for Congressional review of the basis for ERDA's arrangements with private firms.



Appropriations Request. The President will later request an appropriation of contract authority which is required by the proposed bill before a contract can be executed, in order to cover the estimated maximum Federal Government exposure for specific projects in the event that it were necessary to assume assets and liabilities. Again, expenditure of these funds for assumption of any private venture is not considered likely.

DEVELOPMENTS LEADING TO THE PRESIDENT'S PLAN

U.S. Leadership in Uranium Enrichment Technology. The United States is the recognized world leader in technology for refining or "enriching" natural uranium to a form that can be used to make fuel for nuclear power reactors. Natural uranium contains only a small amount (approximately .7%) of the fissionable isotope U-235. In order to be useful to make fuel for most nuclear reactors, the concentration of U-235 must be increased to about 2-4% through a process of separating off other isotopes. The technology was developed and is owned by the Federal Government. Certain parts of the technology are classified. Principal U.S. technologies are:

- Gaseous Diffusion. This technology which is now used in the three existing government-owned enrichment plants was developed in the 1940's. Over 30 years of large scale operating experience and process improvement have made the technology the most reliable and economical now available for commercial scale operations. The next increment of capacity must make use of this technology.
- Gas centrifuge. The gas centrifuge process of uranium enrichment provides an alternative to gaseous diffusion. Full operation of a Government pilot plant is scheduled for early 1976. If the projected economics of the process are realized, gas centrifuge technology is expected to be used as subsequent increments of commercial capacity are added.
- Laser Separation. ERDA is conducting a basic research program to determine whether this technology is technically or commercially feasible. Even if successful, the technology will not be available in time to be used for the next several increments of needed enrichment capacity.

Existing U.S. Capacity. The three Government-owned uranium enrichment plants will, when currently authorized expansion is completed, have the capacity to produce enriched uranium needed to fuel about 300 large nuclear-powered electric generating plants in the U.S. and foreign countries.

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The Growing Market. Current estimates are that the U.S. will require for domestic needs added enrichment capacity by 2000 equal to 6 to 9 plants the size of any one of the three existing plants and that added capacity for the total market served by the U.S. will equal 9 to 12 similar size plants.

Potential Foreign Suppliers. The principal existing capacity for enriching uranium outside the U.S. is in the Soviet Union. A French-led diffusion plant project (Eurodif) is expected to begin production in 1979 and its capacity is reported to be fully committed. A British-German-Dutch consortium (Urenco) plant will also begin expanded operations in 1979. Plans for additional plants are being discussed by France, Canada, South Africa, Japan, Australia and Brazil.

The Program to Develop a Competitive Industry. The Atomic Energy Act of 1954 provides that "the development, use and control of atomic energy shall be directed so as to ... strengthen free competition in private enterprise". An Executive Branch policy to encourage private industry to build the next increments of uranium enrichment capacity was announced in June 1971. Beginning in 1973, the Atomic Energy Commission (AEC) asked private firms to consider building, owning and operating enrichment plants and granted qualified U.S. firms access to classified aspects of the Government's work, under carefully controlled security conditions, in order that they might make their own assessment of the commercial potential for private enriching plants. A number of firms responded to the invitation from which several consortia have emerged which are interested in pursuing the possibility of building enrichment plants.

Diffusion Plant. One consortium -- the Uranium Enrichment Associates (UEA) -- is interested in constructing a \$3.5 billion gaseous diffusion plant equivalent to the expanded capacity of one of the 3 existing Government-owned plants.

Centrifuge Plants. Other firms and consortia -- Centar, Exxon Nuclear and Garrett Corporation -- have expressed interest in cooperative arrangements with the Federal Government which would lead to demonstration gas centrifuge plants which could be expanded in the future to commercial scale plants. The AEC (predecessor to ERDA) requested proposals from industry to advance the demonstration of centrifuge technology. A modified request for proposals is being issued today by ERDA.

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Obstacles to the Entry of Private Industry. All firms interested in building, owning and operating a private plant have concluded that some form of Government cooperation and temporary assurances are essential to begin the transition to a private competitive industry. Among the factors that have contributed to this conclusion are:

- . The complexity of the undertaking, including the Federal ownership and the classification of the technology.
- . The large financial commitment required and the difficulty encountered in trying to obtain private financing.
- . The inherent difficulties of ending a Government monopoly.
- . The recent adverse financial situation of U.S. electrical utilities which are the customers for a plant. (Their long term contracts for uranium enrichment services must provide security for the long term financing required.)
- . Some uncertainty as to whether the Government would follow through on its commitment to achieve privatization.

Alternatives to Private Entry. The principal alternatives to an immediate effort to achieve privatization include:

- . All future additions to capacity financed, built and owned by the Federal Government, thus continuing indefinitely the existing monopoly.
- . Government financing and ownership of one or more additional increments of capacity, followed by another attempt to achieve privatization.

A thorough review indicated that, regardless of the alternative selected:

- . The next increment of capacity can be on line when needed (now estimated about 1983).
- . Controls and safeguards involving classified technology and non-proliferation of nuclear materials can be maintained.
- . Customers for the next increment are expected to be largely foreign.
- . Foreign investments in an enrichment plant can be accommodated

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This review led to the conclusion that the task of explaining and implementing the plan for achieving a private industry would be difficult and that a substantial effort would be required by both the Congress and the Executive Branch, but that the benefits of privatization justified the effort. The benefits of privatization include:

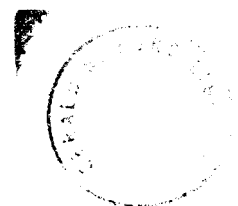
- . Avoiding a cost to taxpayers of \$40 to \$50 billion for plants that should be on line by 2000, if the Federal Government were to finance and own the plants. (These funds would not be recovered to the Treasury for many years.) Under the President's plan, revenue of about \$90 to \$100 million per plant per year would flow to the Federal Treasury from industry, principally from taxes and payments for the use of Government inventions and discoveries.
- . An early end to the Government monopoly in a type of commercial activity.
- . Avoiding expansion of the public sector when industry is willing and able to do the job.
- . Competition which would provide incentives for lower costs and additional improvements in technology.

The Proposal from Uranium Enrichment Associates (UEA). Uranium Enrichment Associates is a consortium currently consisting of Bechtel Corporation and the Goodyear Tire and Rubber Company. On May 30, 1975, UEA submitted a revised proposal to ERDA calling for cooperative arrangements with the Federal Government. The principal features of the UEA proposals are summarized in Attachment #1. A contract containing the details of a cooperative agreement would be negotiated by UEA and ERDA.

Centrifuge Enriching Projects -- Request for Proposals.

- . In August of 1974 the Government announced a program expected to lead to several relatively small industry constructed demonstration projects.
- . Gas centrifuge technology has not yet been applied on a production scale sufficient to permit full industry commitment to large plants. At least three companies are interested in undertaking private centrifuge enriching projects now which would be scaled up progressively from small demonstration modules to a capacity the economies of scale for centrifuge enriching are expected to be largely realized. These are expected to be 1/3 to 1/2 the capacity of the planned diffusion plant.

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- . Government-industry cooperative arrangements similar to that required for the UEA diffusion project may be required.
- . A Request for Proposals for this program which extends and elaborates upon the earlier program is being issued today:
 - Proposals will be due on October 1, 1975 and it is the Government expectation that several proposals could be accepted to proceed more or less in parallel with each other and with the UEA project.
 - Proposers will describe their proposed project in detail, including plant design, size, location and schedules and specify the type and magnitude of Government support necessary to proceed.
 - Small initial modules, perhaps 200-300 thousand units per year could be in operation in the early 1980's with 2-3 million unit commercial scale plants achieved in the mid-1980's on a time frame consistent with the growth of the market.
- . Centrifuge technology permits adding small capacity increments as required to closely follow market needs.
- . Proceeding with several centrifuge demonstration projects in the same time frame as the gaseous diffusion plant will further the objective of developing a private, competitive enriching industry and maintaining U.S. world leadership in this field.

OTHER ACTIONS RELATED TO URANIUM ENRICHMENT CAPACITY

Increasing ERDA's Charge for Uranium Enrichment Services.

- . The current price charged by ERDA for uranium enrichment is based on a statutory formula which says that ERDA's charge must be established on the basis of the recovery of the Government's costs over a reasonable period of time. Application of the formula has resulted in a present charge of about \$42 to \$48 per separative work unit, depending on the type of contract a customer has with ERDA. This price will rise by the end of 1975 to about \$53 and \$60 per unit. These prices reflect the low cost of construction during the 1940's and 1950's for plants built primarily for military purposes. These prices are much lower than the quoted world market prices of enrichment services of between \$75 to \$100 per unit.

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The President announced in his 1976 Budget his intention to propose legislation to the Congress to permit ERDA to raise the price of enrichment services from its plants. The new price would be established to recover the Government's costs and place the pricing of Government enriching services on a more business-like basis. This step would encourage private sector interest in building enrichment facilities and end an unjustifiable subsidy to both foreign and domestic customers. The new price would include a rate of return on investment more appropriate to the private sector than the Government's rate of return, an allowance equivalent to corporate income taxes and also include other costs typical of private operations. On this basis the new price per separative work unit will be approximately \$76.

This legislation has been submitted to the Congress by ERDA.

Contract Relief for Current ERDA Enrichment Customers.

Present ERDA enrichment contracts require customers to commit to a fixed delivery schedule and to make prepayments amounting to about \$3 million per plant several years prior to the first delivery of enriched fuel. Since these contracts were signed, many nuclear power plants whose fuel was covered by these contracts have been postponed or cancelled.

As a result, many utilities now face the prospect of having to pay for uranium enrichment services well in advance of the revised completion dates for the reactors.

In order to free both ERDA and the enrichment customers from unrealistic commitment, ERDA, after notifying the Joint Committee on Atomic Energy (JCAE), has announced that it will:

- Grant customers the right within a 60-day period to serve notice that they wish to terminate their contract with no cancellation fee and with refund of any payments.
- Permit those wishing to defer deliveries (rather than terminate contracts) to have a one-time adjustment of contract commitments without penalty.
- Permit a similar one-time adjustment of the rate at which uranium feed should be sent to the enriching plants to coincide in part with the slipped enrichment requirements.

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These actions would:

- Result in a larger U.S. stockpile of enriched uranium for use as an inventory to support the new private uranium enrichment plants with backup supplies of enriched material, should any delays occur in their initial operation.
- Establish a more realistic data base for evaluating future domestic and foreign enrichment requirements.
- Grant needed short-term financial relief to the utility industry.

ERDA Conditional Contracts for Enrichment Services.

- . Some customers placing orders with AEC (predecessor to ERDA) in mid-1974 were given conditional contracts; i.e., contracts contingent upon the approval by U.S. regulatory authorities (now the Nuclear Regulatory Commission) of the use of recycled plutonium as a nuclear reactor fuel. These conditional contracts were backed up by announcement that the U.S. would have expanded capacity available that could fulfill requirements, if needed.
- . The expanded U.S. capacity that will result from the President plan will provide sources of supply that can be tapped by the holders of conditional contracts.

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SUMMARY OF THE URANIUM ENRICHMENT
ASSOCIATES (UEA) PLAN AND PROPOSAL TO ERDA FOR
A COOPERATIVE ARRANGEMENT

Physical Description of the Project.

- . A 9 million separative work unit per year gaseous diffusion plant would be built near Dothan, Alabama on a 1720 acre site on the Chattahoochee River.
- . When in full operation the plant could provide enriching services for about 90 large nuclear power reactors.
- . The plant will require about 2500 megawatts of electrical power which will be supplied from a dedicated nuclear power facility located nearby.
- . Project cost estimate (exclusive of the power project) has been estimated by UEA to be \$3.5 billion in 1976 dollars.
- . UEA projects continuation of design work now underway on the project during the next several years with construction scheduled to commence in 1977.
- . Full production from the plant is projected in 1983 with limited production starting in 1981.
- . Nearly 50 million construction manhours are estimated for the project. A peak construction labor force of about 7000 workers will be reached in 1979-80 and the permanent operating staff of the project is expected to be about 1100.
- . The plant will be processing and upgrading natural uranium and thus will have essentially no radiation hazard. It will be similar to a large materials handling plant except that the product material will be much more valuable.

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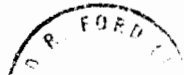


Financial Structure of UEA Project.

- . UEA expects that two to six companies in addition to Bechtel and Goodyear will comprise the consortium that will undertake the project. These companies are expected to be identified within the next few months.
- . Based upon marketing efforts to date, UEA projects that about 40 percent of plant capacity will be taken by U.S. domestic utilities and the balance by non-U.S. organizations in countries with which the United States has Agreements for Cooperation permitting the transfer or disposition of enriched uranium. (Under the Atomic Energy Act voting control for such a project must remain in the hands of the United States investors at all times and the project is so structured. The secrecy of the process will be protected and foreign customers or investors will not have access to classified technology or information.)
- . Project financing using an 85 percent debt, 15 percent equity ratio is contemplated for the project.
- . The equity corresponding to the domestic portion of plant output will be supplied by UEA and the debt financing will be raised in the commercial market primarily on the basis of the security of long-term (25 year) non-cancelable enrichment service contracts with domestic utilities.
- . Both equity and debt for the foreign share of plant output is to be supplied from the foreign customers' own sources of capital.
- . Pricing of product from the plant is based upon the recovery of all operating costs, servicing of debt and an after-tax return of approximately 15 percent on equity.
- . A 3 percent payment, based on gross sales would be paid to the Government for use of taxpayer-developed technology.

Customers.

- . A number of United States' utilities have executed contingent letters of intent with UEA to purchase uranium enriching services from the new plant and a number of additional utilities are now evaluating their requirement for services.

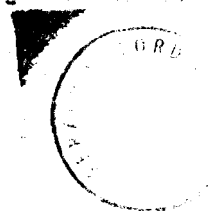


- . UEA has made extensive marketing contacts overseas and anticipates that foreign orders will be forthcoming.

Cooperative Arrangements.

- . Due to the unique nature of the project, the very large capital requirements, and long payout periods, UEA has concluded that it would not be possible to move ahead without certain forms of Government backup assistance.
- . UEA has proposed that the Government:
 - Supply, at cost, essential components presently produced exclusively by the Government.
 - Supply the Government's gaseous diffusion technology and warrant its satisfactory operation.
 - Buy enriching services from UEA or sell enriching services to UEA from the Government stockpile to accommodate plant start-up and loading problems.
- . UEA has also proposed that:
 - The Government provide standby financial backup assistance lasting for the critical construction period plus approximately one additional year to offset the current weak credit position of the U.S. utility industry. The Government provide financial backup if UEA cannot complete the plant or bring it into commercial operation. A call on this financial backup is made at the risk of loss to UEA of its equity interest. In this event, the Government has the right to acquire UEA's domestic equity position and the obligation to assume UEA's liabilities and debt.
 - The Government may also require UEA to release the project to the Government if the Government's interest so demands. In this event, the Government would be obligated to assume UEA's liabilities and debt.
 - The consideration for acquisition of UEA's domestic equity position in either case can range from loss of equity for uncorrected gross mismanagement of UEA to full fair compensation for causative events outside UEA's reasonable control.

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All of the above forms of backup assistance would be subject to contract negotiations between ERDA and UEA. UEA believes that the plant can be completed within the private sector with no net expenditure of Government funds.

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Uranium Enrichment as Part of the Nuclear Fuel Cycle

The attached chart depicts the nuclear fuel cycle for Light Water Reactors, (the type of reactors most commonly used in the U.S.). About 97% of the reactors obtaining enrichment services from the ERDA gaseous diffusion plants are Light Water Reactors, a similar fuel cycle exists for the other present reactor type -- the High Temperature Gas Cooled Reactor.

Prior to the enrichment step, uranium ore is mined from the earth's crust and sent to a mill where uranium concentrate is produced. This concentrate is often referred to as yellowcake, or by the chemical symbol, U_3O_8 . There are 14 mills presently operating in the U.S. The uranium concentrate is then sent to a converter where it is converted to uranium hexafluoride, or UF_6 . This is the only simple form of uranium that can be gaseous at conditions near room temperatures and pressures. There are two UF_6 conversion plants operating in the U.S.

The uranium hexafluoride is then sent to a uranium enrichment plant. There are two processes under consideration for commercial use in the U.S. -- the established gaseous diffusion process, used in the ERDA plants, and the gas centrifuge process. The UEA will use the gaseous diffusion process. In the process, the uranium hexafluoride gas is pumped through a semipermeable membrane. The desirable fissionable isotope, U-235, diffuses through the membrane more readily than the nonfissionable isotope, U-238. A stream depleted in U-235 is collected from the plant and sent to storage. A stream enriched in U-235 is collected from the plant and sent to a fuel fabrication plant. In this plant, the uranium hexafluoride is converted to uranium dioxide UO_2 , formed into pellets, and placed in zirconium tubes. The tubes are assembled into bundles and sent to nuclear power plants. Seven U.S. companies are involved in the fabrication of nuclear fuel.

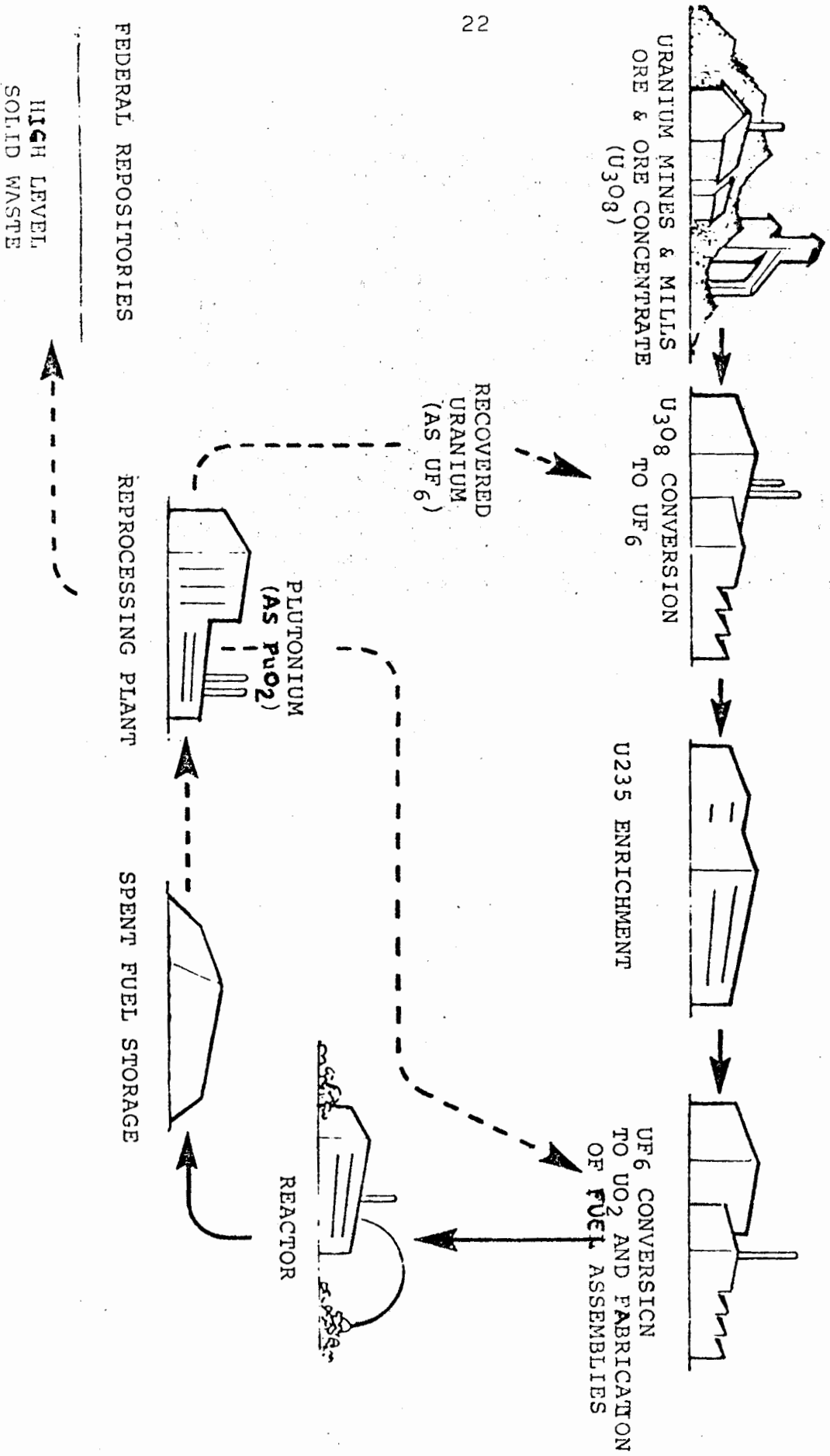
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After the fuel is used in the nuclear power plant, it is discharged and allowed to cool in a large water basin at the plant. The spent fuel will then be sent to a chemical reprocessing plant. In this step, the uranium and reactor-produced plutonium will be separated from the highly radioactive fission products generated while the fuel is in the nuclear power plant. The radioactive wastes in proper form will be sent to a repository. The recovered uranium will be converted again to the hexafluoride and reinserted into the enrichment plants for reenrichment. Plutonium is also a fissionable material that can be used as fuel in a nuclear power plant. If use of the plutonium is granted by the Nuclear Regulatory Commission, it would be sent to the fuel fabrication plants; there it would be mixed with the uranium and formed into pellets for nuclear power plant fuel. There are currently no commercial chemical reprocessing plants operating in the U.S.; one plant is shut down for modification and another is under construction.



The Light Water Reactor Nuclear Fuel Cycle



TAB E

THE WHITE HOUSE

WASHINGTON

DECISION

May 15, 1976

MEMORANDUM FOR THE PRESIDENT

FROM:

JIM CANNON *J. Cannon*

SUBJECT:

The Uranium Enrichment Bill Reported
by the JCAE.

PURPOSE

The purpose of this memorandum is to assess the Nuclear Fuel Assurance Act ordered reported on May 11 by the Joint Committee on Atomic Energy.

THE JCAE BILL

Briefly, the JCAE made two significant changes from the bill we had previously agreed to:

- The JCAE bill specifies that ERDA cannot enter into contracts with private ventures unless the Congress passes a concurrent resolution of approval within 60 legislative days after receiving the contract. Previously, the bill had provided that ERDA could sign the contract if the Congress had not passed a concurrent resolution of disapproval.
- The JCAE bill and Committee Report states that ERDA "is hereby authorized and directed to initiate construction planning and design, construction and operation activities for expansion" at Portsmouth.

THE ISSUES

The three principal issues raised by the JCAE bill are:

1. Is the Congressional review procedure constitutional?

White House Counsel (Barry Roth), after consulting with the Justice Department, has concluded that the



review procedure does not raise significant questions of constitutionality, and that you have the option of accepting the bill as written. Counsel further advises that the principal question is whether your acceptance of this bill might be perceived as inconsistent with your veto of the International Security Assistance Arms Exports Control Act of 1976. Counsel, Congressional Relations and NSC staff concluded that this was not a significant problem.

2. Can we expect Congress to approve proposed contracts within the 60 days allowed?

Clearly, the requirement for positive Congressional approval action is a more difficult requirement than absence of disapproval. However, your advisers believe the new requirement is, on balance, acceptable because:

- a. The bill itself sets up a timetable for Congressional action (30 days for JCAE; bill must become pending business in each House within 25 additional days and be voted upon within 5 days), though the bill also provides this could be changed.
- b. We believe that Chairman Pastore and Committee Members are pursuing the matter in good faith and would work to get contracts considered within the time provided.
- c. If Congress does not approve a contract, the implication that Congress will have to appropriate more Federal dollars instead will be clear.
- d. Informal checks with prospective private enrichment firms indicate they think this is the best they are going to get out of Congress.

3. Is the requirement to initiate work on an add-on plant at Portsmouth acceptable?

Clearly, the bill and the Report imply a commitment to build a \$3 billion Portsmouth add-on. However,



the Budget Committee Staff Report accompanying the Committee Report implies the opposite.

On balance, OMB and your other advisers believe the provision is acceptable because:

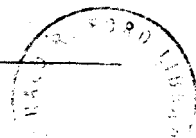
- a. There will be future opportunities to evaluate the feasibility and desirability of proceeding with the add-on plant as (1) the need for higher authorizations and appropriations are considered; (2) the environmental impact is evaluated; and (3) uncertainties concerning electrical power supply and advanced diffusion technology are clarified.
- b. There may in fact be a need for the add-on plant (in addition to the expected private plants) because:
 - (1) Existing Government plants may now be over-committed in contracts already signed.
 - (2) The additional Government owned capacity, if built, could be used to add enriched uranium to the national stockpile, to back up your commitment that services will be available when needed by foreign and domestic customers, and as a hedge against delays in centrifuge plants or unexpected failure of private ventures.
- c. The provision could be accepted without reopening the Government's "order book." Reopening the Government's order book would be in direct competition with the private ventures and probably prevent them from going ahead.
- d. ERDA believes work necessary to an add-on plant could be sequenced so that it would not compete excessively for talent and resources needed for private plants. Thus the add-on work would not prevent private ventures from going ahead.

RECOMMENDATION

That you consider the Nuclear Fuel Assurance Act as ordered reported by the JCAE on May 11, 1976, to be acceptable. OMB, NSC, ERDA, Congressional Relations, White House Counsel, Jim Connor and I concur.

APPROVE _____

DISAPPROVE _____



TAB F

DRAFT

Last June I proposed to the Congress legislation that would establish a major new private industry in America -- providing the enriched fuel for nuclear power reactors. My proposal, the Nuclear Fuel Assurance Act, would make it possible for the U.S. to maintain its leadership as the world's supplier of uranium enrichment services for the peaceful uses of nuclear power.

The Joint Committee on Atomic Energy of the Congress has, after ten months, made some modifications in my proposal and approved it.

I have reviewed the changes in the bill and concluded that I will support it.

The bill, now before the Congress, meets five fundamental objectives which I stated almost a year ago:

1. Act now to meet the future needs, domestic and international, for this essential energy source.
2. End the Federal government monopoly on supplying enriched uranium for nuclear power plants.
3. Establish a procedure whereby private enterprise can bring into commercial use the tech-



nologies created by Federal research and development -- with proper licensing, safeguards, and export controls, and with the payment of royalties and taxes by private enterprise to the U.S. Treasury.

4. Provide a back-up plan for expanding existing Federal uranium enrichment capacity if private ventures are unable to meet, on time, the needs of U.S. and foreign customers.
5. Assist in controlling nuclear proliferation by persuading other nations to accept international safeguards and forego development of nuclear weapons.

Although the Joint Committee on Atomic Energy's amendment requiring Congressional approval of each contract may cause some delays in the creation of this new American industry, the bill does establish the principle of opening this technology to the private sector.

The bill and Committee report also authorize and direct the Energy Research and Development Administration to begin planning and design for the expansion of the existing uranium enrichment plant at Portsmouth, Ohio. As soon as Congress passes the Nuclear Fuel Assurance Act, I will ask Congress



to appropriate \$170 million for FY 1977 to proceed with the design, planning and construction of the Portsmouth plant.

Four major U.S. companies have submitted to ERDA proposals to build uranium enrichment plants. Proposed contracts with the four firms can be submitted to Congress shortly after the Nuclear Fuel Assurance Act is enacted. I urge Congress to act promptly on this legislation and on each contract submitted subsequently.

We will give each private venture an opportunity to prove itself to the Congress and in the market place. In order, however, for the U.S. to have sufficient supplies to meet present and prospective commitments here and abroad, we will also move ahead promptly with the Portsmouth addition.

We need this legislation. It will assist the Nation in ^{in the years ahead,} reaching energy independence and create, ~~over-time,~~ millions of jobs throughout the country.

It will also benefit the energy consumer. Electricity costs far less when produced by nuclear plants than when produced from fossil fuel plants. Nuclear power is not



subject to oil embargo or a price increase dictated by any foreign supplier. And based on the past 18 years of experience, commercial nuclear power has an unparalleled record of safety.



TAB G

One other item of significant importance. Last June I proposed to the Congress legislation that would establish a major new private industry in America providing the enriched fuel for nuclear power reactors. My proposal, the Nuclear Fuel Assistance Act would make it possible for the United States to maintain its leadership as the world supplier of uranium enrichment services for the peaceful use of nuclear power.

The Joint Committee on Atomic Energy in the Congress has made some modifications on my proposal and approved it. I have reviewed the changes in the bill and concluded that I will support it. The bill meets five fundamental objectives, which I stated a year ago:

First, an act to meet the future needs, domestic as well as international, for this essential energy source;

It would end the governmental monopoly on supplying enriched uranium for nuclear power plants;

Three, establish a procedure whereby private enterprise can bring into commercial use the techniques created by Federal research and development with proper licensing, safeguards and export controls;

With the payment of royalty and taxes by private enterprise to the United States Treasury;

Provided also in the bill is a complimentary back-up system for expanding existing Federal uranium enrichment capacity if private ventures are unable to meet on time the needs of U.S. and foreign customers;

Last, assist in controlling nuclear proliferation by persuading other nations to accept international safeguards and forego developments of nuclear weapons.

Finally, the bill and the committee report also authorizes and directs the Energy Research and Development Agency to begin manning and designing for the expansion of the existing uranium enrichment at Portsmouth, Ohio.

As soon as Congress passes the nuclear Fuel Assurance Act, I will ask the Congress to appropriate \$170 million for fiscal year 1977 to proceed with the design, planning and the procurement of long lead time construction for the Portsmouth plant. This, I think, is a good program, and I hope the Congress acts so that I can request of the Congress the necessary funding for the complimentary program at Portsmouth, Ohio.

I will be glad to answer the first question.

MORE



TAB H

QUESTION:

When did the President submit proposal to Congress?

ANSWER:

June 26, 1975.

QUESTION:

What is the status of the legislation?

ANSWER:

The Joint Committee on Atomic Energy (JCAE) reported the bill out by a vote of 15-0 on May 14, 1976. It is now awaiting action by the House and Senate. (First action in the House will have to be by Rules Committee).

QUESTION:

How does the JCAE's bill differ from the President's proposal?

ANSWER:

In two ways. First, it provides for a more stringent Congressional review procedure. Congress will have a clear opportunity to approve or disapprove each proposed contract. Second, the bill and report make more specific the plan to proceed with a Government add-on plant at Portsmouth, Ohio. It authorizes money for this purpose in FY 1977.

QUESTION:

What happened to all the opposition to the Proposal?

ANSWER:

First, the extensive hearings held by the JCAE apparently provided the answers to opponents questions. The JCAE reported the bill 15-0.

Second, the bill reported by the JCAE makes very clear that the Congress will have an opportunity to review and approve each contract with private ventures that want to build enrichment plants. This is another opportunity for everyone to be sure that the private ventures are in the public interest.



QUESTION:

When will work on the Portsmouth plant begin?

ANSWER:

Design and planning has been underway for some time. On May 5, 1976, the President asked for Congressional approval of \$12.6 million to continue this work during the rest of FY 1976 and the Transition Quarter. Last night he indicated that he would request \$170 million to continue the work during FY 1977.

QUESTION:

What is the total cost of the Portsmouth addition?

ANSWER:

I understand that the total estimated cost of construction and initial operation is around \$2.8 million, in FY 1977 dollars. That is approximate.

QUESTION:

When will work begin on the plant?

ANSWER:

Design and planning are already underway. This will continue and be stepped up during FY 1977.

QUESTION:

What does the \$170 million cover?

ANSWER:

It will cover additional design and planning; procurement of long lead-time items; and work on a facility at Portsmouth to test the advanced technology that is planned for the Portsmouth plant; and other similar work needed for a large undertaking like this.

QUESTION:

How long will it take to build the plant?

ANSWER:

I understand that the current schedule anticipates its completion around 1983 or 1984.



Question

Does the President's agreement to build the Portsmouth plant mean that he is sacrificing his commitment to private industry to gain votes in the Ohio primary?

Answer

Certainly not. Under the JCAE bill, private industry will be able to go ahead, along with work necessary for a plant at Portsmouth. Planning for the Portsmouth add-on plant has been underway for months. The President's proposal last June called for continuation of the planning for the Portsmouth add-on. The intention of the JCAE to move ahead with this addition is clear in their bill. The President's intention was affirmed last night.

Question

As far as Portsmouth is concerned, what is new in the President's statement?

Answer

He indicated that he will support and accept the JCAE's bill and, specifically he indicated that he would request \$170 million needed to proceed with work during FY 1977 necessary for the plant.

He had not previously committed to do that.

Further, he makes clear that the Portsmouth plant is complementary to the plan to begin the transition to a private competitive industry. Both approaches can proceed together.



IS THE ADMINISTRATION FIRMLY COMMITTED TO BUILD AN
ADD-ON ENRICHMENT PLANT AT PORTSMOUTH

QUESTION

We still cannot tell whether the Administration is really committed to build an add-on enrichment plant at Portsmouth or whether you are regarding the add-on as a contingency -- to be built only if private ventures don't succeed. Which is it?

ANSWER

First, the key to the whole program is Congressional passage of the NFAA, That's the critical step that is needed.

Second, the President has indicated that he will accept the JCAE Bill. That bill, in Section 4, directs that work proceed on the Portsmouth add-on.

On May 5, 1976, the President asked the Congress to approve \$12.6 million to continue the work during the remainder of FY 1976 and the Transition Quarter.

Last night he indicated that he would request \$170 million for FY 1977 to continue work that is necessary to the construction of the plant.

(Only, if pressed) I should also point out that, as a practical matter, no one can make an irrevocable commitment at this time that either the prospective privately owned plants or the add-on plant will be completed and operated, for a number of reasons. For example,

- . First, the Congress must now pass the bill.
- . Second, a final decision to construct any enrichment plant would have to be preceded by compliance with the National Environmental Policy Act (NEPA), including the preparation of a final environmental impact statement (EIS). Even the appearance of a firm commitment at this time to build or permit building a plant might provide grounds for later challenge as to whether NEPA had been observed.

Also, there are remaining uncertainties that have to be resolved. In the case of the add-on plant, for example:

- There is uncertainty about the availability of electrical power. Apparently, it will be necessary to build two or more coal-fired or nuclear plants and the questions of whether, when and where such plants could be built is unresolved.
- ERDA plans to use a substantially larger compressor-converter system in the add-on plant. This system has not yet been demonstrated or produced and this work must be preceded by construction of test facilities and by testing of the system.



5/27/76

Draft

WILL THE GOVERNMENT'S ORDER BOOK FOR URANIUM
ENRICHMENT SERVICES BE REOPENED?

Question

Now that you are committed to proceed with work necessary for a Government-owned add-on enrichment plant at Portsmouth, Ohio, will ERDA begin accepting orders against that plant?

Answer

The four private firms that wish to finance, build, own and operate enrichment plants are already negotiating with prospective foreign and domestic customers, so the order books are already open.

Furthermore, the President made clear when he submitted his proposal in June 1975 that the Government would take the actions necessary to assure that customers placing orders with private ventures would have the services available when they are needed.

There is no need for ERDA to begin accepting orders again. If fact, such action would be directly contrary to the spirit and intent of the NFAA -- which has as a major purpose the creation of a private competitive uranium enrichment industry. If ERDA began taking orders:

- . ERDA would be in direct competition for customers with the four private ventures that are prepared to finance, build, own and operate enrichment plants under the arrangements provided for in the NFAA.
- . Competition from ERDA probably would lead potential customers of the private ventures to hold-off on orders -- on the assumption that the Government would be available to provide enrichment services at a lower, subsidized cost as in the case of existing plants. Customers might hold off even though ERDA currently estimates that the cost of product from the proposed add-on plant will be equal to or higher than that of the proposed private diffusion plant.

Also, there has been substantial change in uranium markets over the past year or two which may mean that it will be more efficient and economical for ERDA to have more enrichment capacity -- and to use less uranium -- in filling contracts it already has signed. In addition, the capacity from an add-on plant could also be used to increase the national stockpile of enriched uranium to assure that it will be available when needed by both domestic and foreign customers, and thus serve as a backup, for example, if centrifuge plants do not come on line as early as expected.



THE WHITE HOUSE
WASHINGTON

June 16, 1976

MEMORANDUM FOR: CHARLIE LEPPERT
BILL WENDALL
FROM: GLENN SCHLEEDER
SUBJECT: NUCLEAR FUEL ASSURANCE ACT

Here is a copy of a letter delivered to Pastore, Baker, Price and Anderson which is designed to clarify legislative history on two key points:

- The description of guarantees in the JCAE report is not intended to preclude government take over of a private project for certain reasons not concerned with enrichment technology.
- That the report language is not intended to preclude technology guarantees for centrifuge that are broader in scope and longer in time than is required for diffusion technology.

I understand that one additional point will be covered in a floor colloquy between Congressmen Anderson and Price; i.e., that the JCAE report language concerning the Portsmouth plant being the next increment of capacity is not intended to preclude a private diffusion plant from going ahead and from coming on line ahead of a government add-on.

cc: Max Friedersdorf
Jim Connor
Jim Cannon
Jim Mitchell

Attachment





UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

June 15, 1976

Honorable John O. Pastore, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Chairman:

The recent action by the Joint Committee on Atomic Energy in reporting out the proposed Nuclear Fuel Assurance Act is most gratifying. Passage of the Bill will provide the basis for expanding uranium enrichment capacity in the United States so that fuel can be available for domestic needs and so that we can maintain our role as a major supplier of uranium enrichment services needed for the peaceful uses of atomic energy in other countries.

In view of the important responsibilities that would be placed on the Administrator of ERDA by the Nuclear Fuel Assurance Act, we have reviewed carefully the Bill as amended by the JCAE and the accompanying report. We are somewhat concerned that the report might in the future be interpreted to limit the Government's actions in a way that was not intended by the Committee when it approved the Bill. The Administrator has asked me to convey for your consideration our understanding of certain responsibilities of the Administrator of ERDA under the proposed legislation, which responsibilities might prove to be ambiguous if not clarified in the legislative history. If you concur, we would appreciate it if you would comment on these points during Floor consideration of the Bill or, if you desire, use all or part of this letter as a means of clarifying the matter involved.

I should also point out that I am not taking issue with the Bill as amended, or with the report as such; however, I do wish to be certain that the responsibilities of the Administrator under the legislation are not ambiguous.

It is my understanding that the Administrator would be authorized to enter into cooperative arrangements, i.e. contracts, upon their approval by the Congress and subject to the enactment of the necessary appropriations language, with private firms wishing to finance, build, own and operate uranium enrichment plants.



The Government processes and know-how and such machinery and technology as the Government will supply to private firms will be paid for by private firms through royalties and through charges for materials and equipment. If a private firm is unable to complete an enrichment facility or bring it into commercial operation, the Government would have authority to take over that project to complete the facility, unless there are more economical alternatives for providing the requisite enriching services to customers of that facility, and to assure that services are available when needed. This is most important since the enrichment services will be contracted for and vital to the nuclear power plants that will be designed and in construction. Although the possibility of a takeover is remote, the legislative authority for it should nonetheless be clear.

The cooperative arrangements would, of necessity, contain contractual obligations concerning takeover of the facilities by the Government if the private sector cannot complete them or bring them into commercial operation. Such an undertaking would be authorized by Subparagraph a(5) of Section 45 (which would be added to Chapter 5 of the Atomic Energy Act by Section 2 of the proposed Nuclear Fuel Assurance Act. The Subparagraph also appears on page 16 of the Committee's Report.). While this seems quite clear, I want to be certain that the "guarantee" that is referred to several times throughout the report does not restrict the Government's rights and obligations concerning the takeover. It is in the best interest of the Government to be clear that there is nothing to impede or limit its ability to take over a project which a private firm was unable to complete or bring into commercial operation. In addition, while the Government guarantees with respect to a diffusion plant project are expected to expire after a year of operation of the completed plant, the guarantees for centrifuge projects are expected to be somewhat broader in scope and time, reflecting the comparative status of technical and economic knowledge.

The concept of "cannot complete or bring into commercial operation" is not described in the report, although there is some legislative history that indicates that these terms include such factors as the inability to obtain long-term commercial financing or necessary Governmental authorizations to construct or operate the projects. We would construe these terms rather broadly so as not to raise any restrictions on the Government's ability to take over.

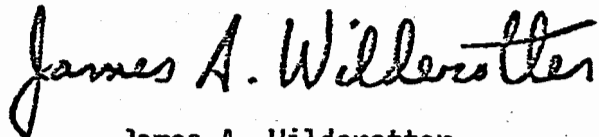
I recognize, as set forth in the aforementioned Subparagraph a(5) that the Government's contingent obligation extends only to the equity or the debt that applies to investors or lenders who are citizens of the United States, or corporations or other entities owned or controlled by citizens of the United States.



Obviously the terms of each proposed cooperative arrangement will be lengthy and cannot be covered in detail in this letter. However, each cooperative arrangement must stand on its own merits and terms, as each will be negotiated by ERDA, and cannot be signed until it has been reviewed and approved by the Congress.

We are most grateful for the valuable contributions that the Joint Committee has made in its action on this Bill and trust that it will provide the basis for prompt action by the full Congress. I hope that the observations and comments in this letter will also be beneficial in advancing the program and assuring our mutual objective of expanding uranium enrichment capacity in the United States.

Sincerely,



James A. Wilderotter
General Counsel

cc: Senator Howard Baker



*Energy
Nuclear*

THE WHITE HOUSE
WASHINGTON

June 17, 1976

TO: JIM CANNON
JIM CONNOR
FROM: *Glenn*
GLENN SCHLEEDE

I just learned about the attached letter from George Murphy to Bob Fri which apparently has been mislaid in Fri's office for the last week.

The letter asks for clarification of:

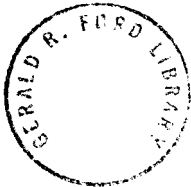
- The President's reference to the Portsmouth add-on as complementary.
- Bob Fri's statement that the "order book" would not be reopened

I'm working with OMB and ERDA on a response.

Attachment

6/18/76

*Glenn
When will it
be ready -
This should have
high priority
Jim*



WALTER H. FOSTER, JR.,
CHAIRMAN
FRANK M. JACOBI, WASH.
STUART S. WOODWARD, MDL
ANDREW M. ANDREWS, N. MEEX
JOHN M. VENTURA, CALIF.
ROBERT M. BAKER, JR., TEXAS
CLAYTON F. GALE, N.A.
JAMES B. PLANTING, MARI
JAMES L. WAGNER, N.Y.
GERRARD F. MURPHY, JR.,
EXECUTIVE DIRECTOR

PHILIP H. FRANK, N.H.
VICE CHAIRMAN
JOHN WOOD, TEX.
TERRY WOODWARD, MDL
RICHARD M. GARDNER, WASH.
JAMES F. BAKER, CALIF.
JOHN D. ANDREWS, N.A.
FRANK M. ANDREWS, N.A.
FRANK MORTON, N.Y.
ANDREW J. BISHOP, CALIF.

Congress of the United States
JOINT COMMITTEE ON ATOMIC ENERGY
WASHINGTON, D.C. 20510

June 9, 1976

Mr. Robert Fri
Deputy Administrator
Energy Research and Development
Administration
Washington, D. C. 20545

Dear Mr. Fri:

In a news conference on May 26, 1976, the President indicated that he would ask Congress to appropriate \$170 million for FY 1977 to proceed with the design, planning and procurement of long leadtime construction for the Portsmouth plant. The President indicated that this would be a "complementary back-up system for expanding existing Federal uranium enrichment capacity if private ventures are unable to meet on time the needs of U.S. and foreign customers."

Subsequently on June 8, you provided a briefing to the Environmental Study Conference in the Rayburn Building. It is understood that during the briefing you commented to the effect that the add-on plant at Portsmouth would not necessarily "open up the order book", but rather would be used to fulfill existing ERDA conditional enriching contracts, to decrease the tails assay so that less uranium would be used, and to provide back-up enriched material for private enrichment plants.

It would be appreciated if you would advise the Joint Committee at your earliest convenience as to the purposes for which the add-on to the Portsmouth plant would be used and also provide an elaboration on the meaning of the President's May 26, 1976, statement that the add-on at Portsmouth would be "complementary".

Thank you for your assistance in this matter.

Sincerely yours,

George F. Murphy, Jr.
George F. Murphy, Jr.
Executive Director



100-170-3211

Energy - Nuclear

THE WHITE HOUSE

WASHINGTON

RECOMMENDED TELEPHONE CALL

TO: Congressman Melvin Price, in his role as senior Majority House Member of the Joint Committee on Atomic Energy, and Floor Manager for the Nuclear Fuel Assurance Act (uranium enrichment).

DATE: June 23, 1976

RECOMMENDED BY: Max Friedersdorf, Jim Cannon, Jim Connor

PURPOSE: To encourage him to press hard with the Speaker for prompt floor action on the Nuclear Fuel Assurance Act (NFAA).

BACKGROUND: After revising your proposal, the JCAE reported the NFAA on May 14 by a vote of 15-0. It has not been scheduled for floor action in either house because, according to the leadership, the schedules are jammed with other bills. It is included on whip notices in both houses--to be taken up whenever there is an opening. Our best information is that a strong push by Cong. Price with the Speaker might get the bill to the floor. We need the bill as soon as possible in order to (a) get the follow-up appropriations language and (b) have time for approval of individual contracts -- all before the end of this session. Meanwhile, the authorization for the add-on plant and the \$178.8 million in appropriations is going ahead because that is authorized in the ERDA authorization bill as well as the NFAA.

TOPICS OF DISCUSSION:

1. We need to move ahead quickly with actions to expand uranium enrichment capacity in this country.
2. As I have indicated, I will accept the NFAA as reported by the JCAE on May 14.
3. Since the JCAE is solidly behind the bill and a rule has been granted, I understand that all that is needed is a strong push from you to get the bill on the floor and passed.



4. We need this authorizing legislation in order to get the appropriations language needed to cover the contingent liability for private ventures, and so that contracts can be submitted for Congressional review.
5. Uranium enrichment is too important to risk delays that might take us beyond the end of this session before firm commitments are made.

June 23, 1976

Action _____



THE WHITE HOUSE

WASHINGTON

*Nuclear File
Energy*

RECOMMENDED TELEPHONE CALL

TO: Congressman Melvin Price, in his role as senior Majority House Member of the Joint Committee on Atomic Energy, and Floor Manager for the Nuclear Fuel Assurance Act(uranium enrichment).

DATE: June 23, 1976

W.B. [Signature]

RECOMMENDED BY: Max Friedersdorf, Jim Cannon, Jim Connor

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5. Uranium enrichment is too important to risk delays that might take us beyond the end of this session before firm commitments are made.

June 23, 1976

Action _____



File

THE WHITE HOUSE

WASHINGTON

June 25, 1976

ADMINISTRATIVELY ~~CONFIDENTIAL~~

MEMORANDUM FOR:

MAX FRIEDERSDORF
JIM CANNON

FROM:

JIM CONNOR *JCC*

SUBJECT:

Results of Telephone Call
to Congressman Melvin Price

Confirming phone call to Max Friedersdorf's office earlier today the President made the following notation on your Recommended Telephone Call to Congressman Melvin Price.

"6/24/76 - 10:45 P.M.

Will urge Tip O'Neill to schedule a definite day this week.

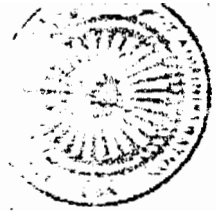
Get John Rhodes to pressure Speaker and Tip to do same.

Mel is all with us."

Please follow-up with appropriate action.

cc: Dick Cheney





UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

June 23, 1976

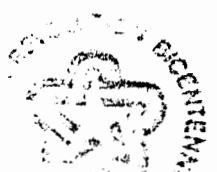
MEMORANDUM FOR: Honorable William H. Harsha
House of Representatives

FROM: R. Hollister Cantus, Director
Office of Congressional Relations

This will respond to the questions which arose in your recent telephone conversation with Bob Fri, our Deputy Administrator, concerning the Nuclear Fuel Assurance Act and the need for more uranium enrichment capacity in this country. Additional capacity is required in the United States for two chief reasons: to serve existing ERDA customers in a manner which requires the use of less natural uranium customers who desire to choose nuclear power as a way of meeting some of their new electrical energy needs.

While projections regarding the likely future demand for nuclear power vary according to underlying assumptions, it is ERDA's estimate that from about 6 to 12 new enrichment plants, each approximately the size of a Portsmouth add-on plant (or about 3 times the size of an economic-sized gas centrifuge plant), will be required to meet demands for services from U.S. enrichment plants to meet the domestic and foreign market by the end of the century. Because of the lead time to construct these plants, this number should actually be committed during the next 15 years or so. This is a formidable task representing the investment of very large amounts of capital. Not making such an investment would, however, result in lesser use of nuclear power, which, even assuming maximum efforts to utilize our coal resources, would almost certainly increase our dependence upon foreign energy sources, chiefly foreign oil.

There have indeed been allegations that an overcapacity in commercial uranium enrichment plants will be or could be provided under the Nuclear Fuel Assurance Act. Such arguments fail to recognize, however, a fundamental principle that these multibillion dollar commercial projects cannot be constructed unless there are customers committed for the output of the plant to warrant initiating construction. In the case of the proposed commercial gaseous diffusion project, customer commitments to buy a significant portion of the project output will be obtained before construction begins. The centrifuge projects must also obtain sufficient commercial customer commitments to buy the ultimate output of plants before construction of each project is completed.



Honorable William H. Harsha

The Nuclear Fuel Assurance Act will provide the framework in which this process can operate until such time as the several projects achieve commercial operation. At that point Government assurances would cease. It is worth repeating that the Act would require specific Congressional approval of the proposed contractual arrangement with each prospective private enricher before that project could proceed.

I would be happy to discuss this with you further, if you so desire.





UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

JUN 28 1976

Mr. George F. Murphy, Jr.
Executive Director
Joint Committee on
Atomic Energy

Dear Mr. Murphy:

In Mr. Fri's absence, I am replying to your June 9, 1976 letter which asks for elaboration on comments concerning an add-on uranium enrichment plant at Portsmouth, Ohio made by the President on May 26 and on those which Mr. Fri made on June 8 in a briefing to the Environmental Study Conference in the Rayburn Building.

The President's comment that a Portsmouth add-on plant would be a "complementary backup system for expanding existing Federal uranium enrichment capacity" was intended to convey the point that the additional enrichment capacity from an add-on plant could be used to fulfill orders already on ERDA's books and to supplement the national stockpile of enriched uranium. Thus the add-on plant would not interfere with the objective of creating competition in the supply of uranium enrichment services, which competition will benefit consumers of electric power produced from nuclear energy. The additional enrichment capacity provided by an add-on plant, instead, could be effectively utilized, through reduction in the tails assay, to achieve better nuclear fuel production economics for the Government plants and to conserve our limited natural uranium resources. (Additional information on the fuel production aspects is presented in the attachment).

To the extent that any additional enrichment capacity beyond that needed to reach this more desirable tails assay level is available, it could be used to increase the national stockpile of enriched uranium -- in the form of separative work units -- thus backing up the commitment that enriched uranium will be available when needed by both domestic and foreign customers.

For the reasons cited above, we would not plan to begin accepting new enrichment service orders based upon capacity that could be provided by an add-on plant. Furthermore, there is no need for ERDA to begin



George F. Murphy, Jr.

- 2 -

accepting such new orders. The four private firms that plan to finance, build, own, and operate enrichment plants are already negotiating with prospective foreign and domestic customers, and the order books are open. If ERDA began taking orders now, ERDA would be in direct competition with the four private firms for customers. This could lead potential customers of the private firms to delay in placing orders needed now by the private ventures. If ERDA competition, or the threat of competition, were to cause one or more prospective private enrichers to drop out, an enrichment industry of initially reduced competitiveness would result. The Federal Government would then find itself in the position of having to commit additional billions of dollars to build more enrichment capacity to make up for the capacity that private industry would otherwise finance and provide. Thus, action by ERDA to take additional orders would be directly contrary to one of the major purposes of the NFAA - creation of a private, competitive uranium enrichment industry.

If you have further questions in this matter, we would be glad to discuss them with you.

Sincerely,



Richard W. Roberts
Assistant Administrator
for Nuclear Energy

Attachment
As stated above



ATTACHMENT

Fuel Production Improvements that Can Result from Add-on Plant Capacity

ERDA's entire enrichment capacity, including the 60% increase in enrichment capacity which will result from the cascade improvement and cascade uprating programs at the existing three Government enrichment plants, has been fully committed since mid-1974 under long-term contracts. ERDA is currently committed by these contracts to supplying enrichment services for 211 domestic nuclear power reactors and 154 foreign nuclear power reactors, which will produce a combined total of 328,000 electrical megawatts.

With respect to existing ERDA contracts for uranium enrichment services, recent changes in uranium ore markets have created a situation where nuclear fuel orders would, ideally, be filled with the use of more enrichment capacity so that less natural uranium would be needed. More specifically, fulfillment of ERDA's existing enrichment services contracts would probably require operation of the Government plants at tails assay of about 0.37% U-235 in the absence of the use of plutonium fuel. Even with plutonium recycle, operation at about 0.29% U-235 would be required. Neither of these levels would permit production of nuclear fuel in an economic fashion. Moreover, operation at such levels would be inconsistent with the national objective of conserving our limited natural uranium resources by using them as effectively as possible.

More specifically, based upon our present knowledge of potential uranium concentrate production capability, the domestic uranium supply industry may not be in a position to meet the feed requirements associated with tails assays as high as 0.37% U-235. Attainable production from domestic sources could, in the early 1980's, reach a level of around 33,000 tons of U_3O_8 per year. The feed requirements for ERDA's fully improved and uprated enrichment complex operating at 0.37% U-235 tails assay would be approximately 75,000 tons of U_3O_8 per year, of which approximately 50,000 tons would have to be delivered by domestic customers. Add-on enriching capacity at Portsmouth could be utilized for reduction of the ERDA tails assay and would concomitantly result in a more realistic production requirement for the domestic uranium supply industry. Furthermore, such reduction in tails assay would result in a greater potential for expansion of the use of nuclear energy in the U.S. through more effective use of our limited domestic uranium resources.

This problem has been recognized for some time and was identified in Dr. Seamans' testimony before the JCAE on December 2, 1975. It has been expected that new private domestic capacity, in addition to serving new customers, would also assist existing ERDA customers. This would be accomplished by permitting ERDA customers to plan their requirements for enriching services on the basis of a lower ERDA plant tails assay and of the availability of additional SWU purchases from new private plant capacity. This would be implemented through the so-called variable tails assay option which ERDA will offer to its fixed commitment customers by the mid-1980's (or limited terminations of ERDA customer contracts in favor of new domestic capacity). In all such instances, however, ERDA plants would continue to operate at their normal 28 million SWU capacity, albeit at lower



tails assay, and thus ERDA would continue to receive revenues based on that operating level. It is our understanding that prospective private enrichers are already marketing on the basis of this option to ERDA customers. These marketing efforts are based upon the economic advantages to existing ERDA customers of purchasing more SWU's from new capacity while lowering their total uranium feed requirements.

An ERDA add-on plant with a capacity of 8.75 million SWU's per year would provide the additional SWU capacity to permit existing ERDA customers to be served at a tails assay of about 0.25% U-235 assuming no recycle of plutonium recovered from spent fuel, or about 0.20% U-235 assuming plutonium recycle. Inasmuch as the estimated cost of SWU's from the add-on plant would be substantially higher than from the existing facilities, the use of the add-on plant to improve the operating characteristics of ERDA's three-plant complex through reduction in tails assay would have to be reflected in an increase in the cost per SWU borne by ERDA's existing customers. However, as mentioned previously, this would result in better total nuclear fuel costs.



File
NFAA

THE WHITE HOUSE

WASHINGTON

June 28, 1976

7/10

MEMORANDUM FOR:

JIM CANNON ✓
JIM CONNOR
JIM MITCHELL
CHARLIE LEPPERT
BILL KENDALL

FROM:

Glenn Schleede
GLENN SCHLEEDE

SUBJECT:

CLARIFYING LEGISLATIVE HISTORY FOR NFAA

Attached is a copy of the letter ERDA recently sent to Senator's Pastore and Baker and Congressmen Price and Anderson in an effort to clarify the legislative history of the Nuclear Fuels Assurance Act with respect to the scope of guarantees and the authority to take over private ventures.

Attachment.





ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

June 15, 1976

Honorable John O. Pastore, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Chairman:

The recent action by the Joint Committee on Atomic Energy in reporting out the proposed Nuclear Fuel Assurance Act is most gratifying. Passage of the Bill will provide the basis for expanding uranium enrichment capacity in the United States so that fuel can be available for domestic needs and so that we can maintain our role as a major supplier of uranium enrichment services needed for the peaceful uses of atomic energy in other countries.

In view of the important responsibilities that would be placed on the Administrator of ERDA by the Nuclear Fuel Assurance Act, we have reviewed carefully the Bill as amended by the JCAE and the accompanying report. We are somewhat concerned that the report might in the future be interpreted to limit the Government's actions in a way that was not intended by the Committee when it approved the Bill. The Administrator has asked me to convey for your consideration our understanding of certain responsibilities of the Administrator of ERDA under the proposed legislation, which responsibilities might prove to be ambiguous if not clarified in the legislative history. If you concur, we would appreciate it if you would comment on these points during Floor consideration of the Bill or, if you desire, use all or part of this letter as a means of clarifying the matter involved.

I should also point out that I am not taking issue with the Bill as amended, or with the report as such; however, I do wish to be certain that the responsibilities of the Administrator under the legislation are not ambiguous.

It is my understanding that the Administrator would be authorized to enter into cooperative arrangements, i.e. contracts, upon their approval by the Congress and subject to the enactment of the necessary appropriations language, with private firms wishing to finance, build, own and operate uranium enrichment plants.



The Government processes and know-how and such machinery and technology as the Government will supply to private firms will be paid for by private firms through royalties and through charges for materials and equipment. If a private firm is unable to complete an enrichment facility or bring it into commercial operation, the Government would have authority to take over that project to complete the facility, unless there are more economical alternatives for providing the requisite enriching services to customers of that facility, and to assure that services are available when needed. This is most important since the enrichment services will be contracted for and vital to the nuclear power plants that will be designed and in construction. Although the possibility of a takeover is remote, the legislative authority for it should nonetheless be clear.

The cooperative arrangements would, of necessity, contain contractual obligations concerning takeover of the facilities by the Government if the private sector cannot complete them or bring them into commercial operation. Such an undertaking would be authorized by Subparagraph a(5) of Section 45 (which would be added to Chapter 5 of the Atomic Energy Act by Section 2 of the proposed Nuclear Fuel Assurance Act. The Subparagraph also appears on page 16 of the Committee's Report.). While this seems quite clear, I want to be certain that the "guarantee" that is referred to several times throughout the report does not restrict the Government's rights and obligations concerning the takeover. It is in the best interest of the Government to be clear that there is nothing to impede or limit its ability to take over a project which a private firm was unable to complete or bring into commercial operation. In addition, while the Government guarantees with respect to a diffusion plant project are expected to expire after a year of operation of the completed plant, the guarantees for centrifuge projects are expected to be somewhat broader in scope and time, reflecting the comparative status of technical and economic knowledge.

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I recognize, as set forth in the aforementioned Subparagraph a(5) that the Government's contingent obligation extends only to the equity or the debt that applies to investors or lenders who are citizens of the United States, or corporations or other entities owned or controlled by citizens of the United States.



Obviously the terms of each proposed cooperative arrangement will be lengthy and cannot be covered in detail in this letter. However, each cooperative arrangement must stand on its own merits and terms, as each will be negotiated by ERDA, and cannot be signed until it has been reviewed and approved by the Congress.

We are most grateful for the valuable contributions that the Joint Committee has made in its action on this Bill and trust that it will provide the basis for prompt action by the full Congress. I hope that the observations and comments in this letter will also be beneficial in advancing the program and assuring our mutual objective of expanding uranium enrichment capacity in the United States.

Sincerely,

James A. Wilderotter

James A. Wilderotter
General Counsel

cc: Senator Howard Baker

Identical letter sent to Mr. Duce



Energy

THE WHITE HOUSE

WASHINGTON

June 29, 1976

Fil

[Handwritten signature]

MEMORANDUM FOR:

JIM CANNON ✓
JIM CONNOR
MAX FRIEDERSDORF
BILL KENDALL
CHARLIE LEPPERT
JIM MITCHELL

FROM:

GLENN SCHLEED *Glenn*

Attached FYI is a copy of ERDA's response to George Murphy (JCAE) letter concerning:

- . what the present meant by the Portsmouth add-on being a "complementary" plant.
- . what uses Portsmouth add-on would serve (i.e., Government won't reopen order book).

Attachments.



Congress of the United States

JOINT COMMITTEE ON ATOMIC ENERGY

WASHINGTON, D.C. 20510

FRANK RUSSELL, VICE
VIRGIL HANCOCK, CHIEF
MARK W. LAMARCA, WARD
ALAN P. BROWN, CLERK
JERRY W. ANDERSON, CLERK
BARBARA L. JAMES, JR., CLERK
FRANK WYSTER, CLERK
ANDREW A. BISHOP, CLERK

June 9, 1976

Mr. Robert Fri
Deputy Administrator
Energy Research and Development
Administration
Washington, D. C. 20545

Dear Mr. Fri:

In a news conference on May 26, 1976, the President indicated that he would ask Congress to appropriate \$170 million for FY 1977 to proceed with the design, planning and procurement of long leadtime construction for the Portsmouth plant. The President indicated that this would be a "complementary back-up system for expanding existing Federal uranium enrichment capacity if private ventures are unable to meet on time the needs of U.S. and foreign customers."

Subsequently on June 8, you provided a briefing to the Environmental Study Conference in the Rayburn Building. It is understood that during the briefing you commented to the effect that the add-on plant at Portsmouth would not necessarily "open up the order book", but rather would be used to fulfill existing ERDA conditional enriching contracts, to decrease the tails assay so that less uranium would be used, and to provide back-up enriched material for private enrichment plants.

It would be appreciated if you would advise the Joint Committee at your earliest convenience as to the purposes for which the add-on to the Portsmouth plant would be used and also provide an elaboration on the meaning of the President's May 26, 1976, statement that the add-on at Portsmouth would be "complementary".

Thank you for your assistance in this matter.

Sincerely yours,


George F. Murphy, Jr.
Executive Director

1976 JUN 17 3211





UNITED STATES
ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
WASHINGTON, D.C. 20545

JUN 28 1976

Mr. George F. Murphy, Jr.
Executive Director
Joint Committee on
Atomic Energy

Dear Mr. Murphy:

In Mr. Fri's absence, I am replying to your June 9, 1976 letter which asks for elaboration on comments concerning an add-on uranium enrichment plant at Portsmouth, Ohio made by the President on May 26 and on those which Mr. Fri made on June 8 in a briefing to the Environmental Study Conference in the Rayburn Building.

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To the extent that any additional enrichment capacity beyond that needed to reach this more desirable tails assay level is available, it could be used to increase the national stockpile of enriched uranium -- in the form of separative work units -- thus backing up the commitment that enriched uranium will be available when needed by both domestic and foreign customers.

For the reasons cited above, we would not plan to begin accepting new enrichment service orders based upon capacity that could be provided by an add-on plant. Furthermore, there is no need for ERDA to begin



accepting such new orders. The four private firms that plan to finance, build, own, and operate enrichment plants are already negotiating with prospective foreign and domestic customers, and the order books are open. If ERDA began taking orders now, ERDA would be in direct competition with the four private firms for customers. This could lead potential customers of the private firms to delay in placing orders needed now by the private ventures. If ERDA competition, or the threat of competition, were to cause one or more prospective private enrichers to drop out, an enrichment industry of initially reduced competitiveness would result. The Federal Government would then find itself in the position of having to commit additional billions of dollars to build more enrichment capacity to make up for the capacity that private industry would otherwise finance and provide. Thus, action by ERDA to take additional orders would be directly contrary to one of the major purposes of the NFAA - creation of a private, competitive uranium enrichment industry.

If you have further questions in this matter, we would be glad to discuss them with you.

Sincerely,



Richard W. Roberts
Assistant Administrator
for Nuclear Energy

Attachment
As stated above



ATTACHMENT

Fuel Production Improvements that Can Result from Add-on Plant Capacity

ERDA's entire enrichment capacity, including the 60% increase in enrichment capacity which will result from the cascade improvement and cascade uprating programs at the existing three Government enrichment plants, has been fully committed since mid-1974 under long-term contracts. ERDA is currently committed by these contracts to supplying enrichment services for 211 domestic nuclear power reactors and 154 foreign nuclear power reactors, which will produce a combined total of 328,000 electrical megawatts.

With respect to existing ERDA contracts for uranium enrichment services, recent changes in uranium ore markets have created a situation where nuclear fuel orders would, ideally, be filled with the use of more enrichment capacity so that less natural uranium would be needed. More specifically, fulfillment of ERDA's existing enrichment services contracts would probably require operation of the Government plants at tails assay of about 0.37% U-235 in the absence of the use of plutonium fuel. Even with plutonium recycle, operation at about 0.29% U-235 would be required. Neither of these levels would permit production of nuclear fuel in an economic fashion. Moreover, operation at such levels would be inconsistent with the national objective of conserving our limited natural uranium resources by using them as effectively as possible.

More specifically, based upon our present knowledge of potential uranium concentration production capability, the domestic uranium supply industry may not be in a position to meet the feed requirements associated with tails assays as high as 0.37% U-235. Attainable production from domestic sources could, in the early 1980's, reach a level of around 33,000 tons of U₃O₈ per year. The feed requirements for ERDA's fully improved and uprated enrichment complex operating at 0.37% U-235 tails assay would be approximately 75,000 tons of U₃O₈ per year, of which approximately 50,000 tons would have to be delivered by domestic customers. Add-on enriching capacity at Portsmouth could be utilized for reduction of the ERDA tails assay and would concomitantly result in a more realistic production requirement for the domestic uranium supply industry. Furthermore, such reduction in tails assay would result in a greater potential for expansion of the use of nuclear energy in the U.S. through more effective use of our limited domestic uranium resources.

This problem has been recognized for some time and was identified in Dr. Seamans' testimony before the JCAE on December 2, 1975. It has been expected that new private domestic capacity, in addition to serving new customers, would also assist existing ERDA customers. This would be accomplished by permitting ERDA customers to plan their requirements for enriching services on the basis of a lower ERDA plant tails assay and of the availability of additional SWU purchases from new private plant capacity. This would be implemented through the so-called variable tails assay option which ERDA will offer to its fixed commitment customers by the mid-1980's (or limited terminations of ERDA customer contracts in favor of new domestic capacity). In all such instances, however, ERDA plants would continue to operate at their normal 28 million SWU capacity, albeit at lower



tails assay, and thus ERDA would continue to receive revenues based on that operating level. It is our understanding that prospective private enrichers are already marketing on the basis of this option to ERDA customers. These marketing efforts are based upon the economic advantages to existing ERDA customers of purchasing more SWU's from new capacity while lowering their total uranium feed requirements.

An ERDA add-on plant with a capacity of 8.75 million SWU's per year would provide the additional SWU capacity to permit existing ERDA customers to be served at a tails assay of about 0.25% U-235 assuming no recycle of plutonium recovered from spent fuel, or about 0.20% U-235 assuming plutonium recycle. Inasmuch as the estimated cost of SWU's from the add-on plant would be substantially higher than from the existing facilities, the use of the add-on plant to improve the operating characteristics of ERDA's three-plant complex through reduction in tails assay would have to be reflected in an increase in the cost per SWU borne by ERDA's existing customers. However, as mentioned previously, this would result in better total nuclear fuel costs.

