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United States
Nuclear Regulatory Commission
Washington, D. C. 20555

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MAR 06 1986

Mr. James Ling
Office of Science and Technology Policy
Room 5005, New Executive Office Building
Washington, D. C. 20506

Dear Mr. Ling:

In accordance with the requirements of paragraph 7c of the Office of Federal Procurement Policy Letter 84-1, April 4, 1984, this letter provides notice that Nuclear Regulatory Commission (NRC) is considering the establishment of a Federally Funded Research and Development Center (FFRDC). The proposed charter for the FFRDC is attached as Enclosure 1.

The FFRDC, to be called the Center for Nuclear Waste Regulatory Analyses (the Center), is to perform research and provide technical assistance to the NRC in the areas of technology involved in licensing nuclear waste disposal and storage facilities under the Nuclear Waste Policy Act of 1982 (NWPA). The facilities for which NRC is required to make licensing decisions will be sited, constructed and operated by the Department of Energy (DOE).

NRC's high-level waste program currently faces two critical problems with respect to contracted technical assistance and research. First, the use of contractors who also have a contractual relationship with DOE's high-level waste program, or with any other party who might be a participant in NRC's high-level waste licensing hearings, may give rise to an organizational conflict of interest situation, in fact or perceived. Second, the NRC, to the extent feasible, must establish continuity of NRC's technical assistance and research program over the next twenty years. The loss of contractor expertise within a relatively short time frame, e.g., five years, would have a significant impact on NRC's technical program because of its evolving nature and NRC's need for contractor experts which have been developed over the long duration of the program to appear as expert witnesses at adjudicatory hearings.

A staff analysis, which includes a thorough assessment of alternative sources or arrangements for meeting the special technical support needs of NRC, in light of the problems identified above, is furnished as Enclosure 2. Based on this assessment, the Commission wishes to explore the feasibility of establishing an FFRDC as a solution to meeting our special needs for research

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and technical assistance to be conducted free of any real or perceived conflict of interest and to be performed with the long-term commitment and institutional memory necessary for the projected duration of the licensing process. The Commission approved publication of a "Notice of Intent" to indicate that the Commission is considering establishing an FFRDC. A copy of the Notice of Intent, which has been forwarded to the Federal Register and Commerce Business Daily, is attached as Enclosure 3. Response to this Notice will be influential in the final decision of the Commission in this matter.

Our needs for establishment of an FFRDC meet the criteria and characteristics outlined in Office of Federal Procurement Policy (OFPP) Letter 84-1. Any decision to establish an FFRDC will also be in compliance with OFPP Policy Letter 84-1 and will be accomplished through a competitive procurement process.

Sincerely,

Original signed by
Victor Stello

Victor Stello, Jr.
Acting Executive Director
for Operations

Enclosures:

1. Draft Charter
2. Staff Analysis
3. "Notice of Intent"

cc: Mr. Robert Cooper
Office of Federal Procurement Policy

CHARTER FOR THE CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES1. Introduction

This charter establishes the requirement for a Center for Nuclear Waste Regulatory Analyses (the Center) and delineates the mission and major functions of the Center.

2. Requirement

Under the Nuclear Waste Policy Act of 1982 (NWSA), the Nuclear Regulatory Commission (NRC) is responsible for licensing high-level waste storage and disposal facilities, which will be sited, constructed, operated, and permanently closed by the Department of Energy (DOE). The granting of an NRC license to begin construction, operation or closure of a facility means that NRC has determined that the facility will provide adequate assurance that public health and safety and the environment will be protected against undue risks.

The NWSA requires that NRC reach a licensing decision (on an authorization to begin construction) within 3-4 years of receipt of DOE's license application for a high-level waste repository. According to DOE's latest published estimates, a license application will be submitted to NRC in 1991. From now until receipt of DOE's license application, NRC will be developing the technical capability to independently evaluate DOE's license application and will be implementing a "prelicensing" guidance and consultation program with DOE to assure that key issues will be identified and formally resolved as early as possible and that NRC's licensing needs are identified to DOE in a timely manner.

To support NRC's assessments, technical contracts have traditionally been obtained through the private sector and the DOE national laboratories. However, many of these contractors and laboratories either perform work for, or are organizationally affiliated with, DOE (the licensee) in its high-level waste program. If the NRC uses contractors and laboratories which perform concurrent work for DOE, or for any other party which may be involved in NRC's high-level waste licensing hearings, a conflict-of-interest situation could arise; and reliance on their work could call into question the independence of NRC's technical evaluation of the license applications and could possibly result in delay of the NRC licensing process. In order to avoid conflict-of-interest situations, while maintaining long-term continuity in technical assistance and research, NRC has chosen to establish and sponsor a Federally Funded Research and Development Center (FFRDC) for support of its high-level waste program under the NWSA.

3. Mission

The mission of the Center for Nuclear Waste Regulatory Analyses is to provide a high degree of scientific competence for research and technical assistance in support of NRC's high-level waste management program under the NWPA. The Center shall provide an organization which possesses high technical competence and is characterized by permanence, stability, and the capability of providing independent objective judgments on complex technical issues.

The Center will perform, under NRC direction, technical assistance and research which will support the licensing reviews and other NRC activities related to geologic repositories, monitored retrievable storage (MRS) facilities, transportation, environmental, and other activities involved in the storage and disposal of nuclear waste under the NWPA. The primary areas of technical assistance and research will include (1) waste systems engineering and integration; (2) long-term performance of a geologic setting; (3) long-term performance of an engineered barrier system; (4) performance of an MRS and repository during operation; (5) special analytical evaluations; and (6) transportation, environmental impacts, and other areas related to the NWPA. Based on the work performed above, the Center will support NRC, as required, by appearing before adjudicatory licensing boards to provide expert testimony. The Center shall have access to existing equipment and facilities for conducting computational and experimental studies, as requested, applied to the above areas.

4. Policy and Program Guidance

The Center is sponsored by the NRC. Operating policy and program guidance will be provided by a Joint Advisory Committee (JAC), established by the Executive Director for Operations.

5. Organizational Constraints

The Center is designated a Federally Funded Research and Development Center (FFRDC) sponsored by the NRC.

The Center shall have the following characteristics:

- (1) not have any relationship with the Department of Energy's high-level waste program, or with any other party who might be a participant in NRC's high-level waste licensing hearings, which may give rise to an organizational conflict of interest, real or perceived.
- (2) not have any impediment to wide access to industry, academic, and U.S. Government data concerning the high-level waste program, including proprietary and privileged data;
- (3) be strictly prohibited from competing for business without the prior approval of NRC;
- (4) be a not-for-profit organization free of control by any organization whose affiliations could give rise to conflict of interest; and
- (5) have facilities and equipment as needed to execute its mission.

6. Duration

This charter will remain in effect until cancelled by the issuing office.

7. Approval

Date: _____

Victor Stello, Jr.
Acting Executive Director
for Operations

SUMMARY OF STAFF ANALYSIS OF ALTERNATIVES TO
AVOID CONFLICT OF INTEREST SITUATIONS

Alternatives Considered by Staff

1. Require current NRC contractors to establish separate organizational/managerial schemes for NRC HLW work vs. HLW work for DOE, States, Tribes, and other involved parties.
2. Enter into an interagency agreement or co-sponsorship arrangement with another Government agency for the use of an existing National Laboratory or a Federally Funded Research and Development Center (FFRDC) that would agree not to perform HLW work for DOE, States, Tribes, and other involved parties.
3. Sponsor our own dedicated FFRDC, which would be a not-for-profit organization free of control by any organization whose affiliations could give rise to conflict of interest and that would agree not to perform HLW work for DOE, States, Tribes, and other involved parties.
4. Perform all technical work in-house with very limited technical assistance contracts to individuals or companies with no present conflict of interest.

Criteria for Evaluating Alternatives

- The degree to which the alternative eliminates potential conflict of interest charges during the NRC licensing proceeding.
- The ability for the alternative to provide long-term continuity in technical expertise (including the availability of expert witnesses during the licensing hearing).
- The degree to which the alternative provides for manageable implementation without significant delays in the program.
- The degree to which the alternative can be implemented within reasonable costs.

Summary of Staff Analysis for Each Alternative

1. Require current NRC contractors to establish separate organizational/managerial schemes for NRC HLW work vs. HLW work for DOE, States, Tribes, and other involved parties.

Pros

This alternative allows the staff to retain the present contractors and technical expertise that it has developed over the years. It allows ongoing work to continue without additional resources needed to break in a new contractor, and it provides maximum flexibility for the staff to use the best technical assistance contractors available.

Cons

This alternative provides only a small degree of improvement over the present conflict of interest problem. There is still the potential for real or perceived conflict of interest since the separate organizational/managerial schemes are still owned by the same parent organization. Also, during a licensing proceeding, expert witnesses from the same parent organization could be testifying for both NRC and DOE (or other parties). If the licensing board applies a strict standard in evaluating conflict of interest situations, the staff's burden to support its licensing position could be substantially increased.

Since the maximum period of a contract is only five years, this alternative does not provide the assurance needed for long-term commitments to NRC nor does it provide the assurance that expert witnesses will be available to testify in the licensing hearing a decade from now.

It is also uncertain as to what additional costs would be passed on to NRC as a result of our requiring separate organizational/managerial schemes.

2. Enter into an interagency agreement or co-sponsorship arrangement with another Government agency for the use of an existing National Laboratory or a Federally Funded Research and Development Center (FFRDC) that would agree not to perform HLW for DOE, States, Tribes, and other involved parties.

Pros

This alternative provides strong potential that conflict of interest charges during the NRC licensing proceeding will be eliminated since the organization would not be affiliated with DOE or other parties. It also provides a higher degree of long-term continuity in technical expertise than would commercial contractors because of the inherent nature of a Laboratory or FFRDC (e.g., their dedication to the Federal Government, multi-disciplined staff, and available facilities).

Cons

Since DOE is the licensee, all DOE-sponsored National Laboratories may be perceived to have a conflict of interest. Furthermore, we have discussed or investigated the work at all of those DOE National Laboratories indicated on the attached list and have determined that they also perform work for DOE's high-level waste program. Most non-DOE National Laboratories/ FFRDC's are Defense-oriented. An interagency agreement or co-sponsorship with an agency such as DOD puts NRC's priorities secondary to those of the sponsoring agency. This situation has already been experienced by the staff in its initial attempt to acquire the Aerospace Corporation (an FFRDC sponsored by the Air Force Space Division) for long-term technical assistance. Not only did the Air Force attempt to place ceilings on the Aerospace resources that would be allotted to NRC, but after several years of obtaining technical assistance from Aerospace, the Air Force decided to expire all non-DOD contracts because of the increasing demands of the Air Force's Strategic Defense Initiative. Another risk inherent with an interagency agreement or co-sponsorship arrangement for an FFRDC is that the FFRDC is most likely to direct its "best people" to the sponsoring agency's activities rather than the activities of the secondary agency.

The long-term implementation of this alternative would be within reasonable costs (e.g., no more than the traditional technical assistance costs); however, there would be some additional start-up costs because of the need for an orderly transition period.

Current FFRDC's and Sponsors

Research Laboratories -

Frederick Cancer Research Center

(FHS/NIH)

Cerro Tololo Inter-American

Observatory (NSF)

Kitt Peak National Observatory (NSF)

National Astronomy and Ionosphere

Center (NSF)

National Center for Atmospheric

Research (NSF)

National Radio Astronomy Observatory

(NSF)

Sacramento Peak Observatory (NSF)

Stanford Linear Accelerator Center

(DOE)

Fermi National Accelerator Laboratory

(DOE)

R&D Laboratories

Jet Propulsion Laboratory (NASA)

Ames Laboratory (DOE)

✓ Argonne National Laboratory (DOE)

Battelle Atomic Power Laboratory (DOE)

✓ Brookhaven National Laboratory (DOE)

✓ E.O. Lawrence Berkeley Laboratory

(DOE)

✓ E.O. Lawrence Livermore National

Laboratory (DOE)

✓ Hanford Engineering Development

Laboratory (DOE)

✓ Idaho National Engineering Laboratory

(DOE)

✓ Knolls Atomic Power Laboratory (DOE)

✓ Los Alamos National Laboratory (DOE)

Oak Ridge Associated Universities

(DOE)

✓ Oak Ridge National Laboratory (DOE)

✓ Pacific Northwest Laboratory (DOE)

Princeton Plasma Physics Laboratory

(DOE)

✓ Sandia National Laboratories (DOE)

✓ Savannah River Laboratory (DOE)

Solar Energy Research Institute (DOE)

Energy Technology Engineering Center

(DOE)

Lincoln Laboratory (DOD/AF)

Study and Analysis Centers

Center for Naval Analyses (DOD/

NAVY)

Institute for Defense Analyses (DOD/

OSD)

Project Air Force (DOD/AF)

System Engineering/System Integration

Centers

Aerospac Corporation (DOD/AF)

C-1 Division of MDC (DOD/AF)

Dated April 4, 1984

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indicate that DOE HLW program work is performed.

3. Sponsor our own dedicated FFRDC, which would be a not-for-profit organization free of control by any organization whose affiliations could give rise to conflict of interest and that would agree not to perform HLW work for DOE, States, Tribes, and other involved parties.

Pros

This alternative provides strong potential that conflict of interest charges during the NRC licensing proceeding will be eliminated since the organization would not be affiliated with DOE or other licensing parties. It also has a strong potential for long-term continuity in technical expertise since it would be solely dedicated to NRC. NRC's screening criteria for the FFRDC would include that the organization already have access to existing state-of-the-art facilities and multi-disciplined staff. Therefore, NRC would not have to incur the huge overhead costs that would be required if new facilities and complete staffs were to be developed. Several existing organizations have expressed an interest in establishing such an arrangement.

Cons

It may be difficult to find an organization that has all the technical expertise needed by the staff. However, it would not be difficult to find one which is strong in certain technical areas. If this alternative was chosen, the parent company would most likely have to build up its technical capability in certain areas. In order to assure that NRC gets the most qualified organization, the FFRDC would have to be competed. This would require at least an additional year to go through the procurement process (including internal agency approvals), while continuing to carry the existing contractors. Assuming a transition period once the FFRDC is in place, there would be additional start-up costs to allow an orderly transition of contracts to the FFRDC. The first three years of funding for the FFRDC take into account the transition period.

4. Perform all technical work in-house with very limited technical assistance contracts to individuals or companies with no present conflict of interest.

Pros

This alternative would provide better control of resources (staff, money and time) and would provide prompt, rapid turn-around on projects. It also provides the strongest potential for eliminating conflict of interest charges during the licensing hearing.

Cons

It is highly unlikely that OMB would support the additional staff needed to perform all technical work in-house, and there are no facilities available in-house for research and laboratory work. The past and present approach has been about 50% staff and 50% technical assistance. However, turnover of staff has been relatively high. Because of the competition for good people by contractors, we should expect to have a high turnover rate for exceptionally qualified and senior technical staff as long as contractors are offering premium salaries. Thus, long-term continuity is not assured.

Staff Recommendation

In evaluating the alternatives, the most important criteria were the potential for eliminating the conflict of interest problem and the assurance of long-term continuity in technical expertise. The delays and costs associated with their implementation were secondary in the evaluation (provided they were within reason).

Based on the staff's analyses of each of the alternatives, the NRC's sponsorship of its own dedicated FFRDC appeared to provide the maximum assurance of eliminating conflict of interest and providing long-term continuity. Therefore, the staff recommends that NRC undertake to sponsor its own dedicated FFRDC (in accordance with Office of Federal Procurement Policy Letter 84-1, "Federally Funded Research and Development Centers").

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NUCLEAR REGULATORY COMMISSION

Notice of Intent

ACTION: Notice of Intent.

SUMMARY: The Nuclear Regulatory Commission (NRC) announces that it is considering the establishment and sponsorship of a Federally Funded Research and Development Center (FFRDC) for waste management technical assistance and research as a potential solution to problems of conflict of interest and continuity of technical assistance. A draft of certain elements of the solicitation package is available for public comment. The package includes a draft statement of work for operating the Center, draft proposal instructions and evaluation criteria, and mandatory requirements. The Commission is also requesting comments on specific questions included in this package. The Commission has not made a commitment to sponsor the FFRDC. Final approval by the Commission will be subject to review of the responses to this Notice and to finding a highly qualified contractor to manage and operate the FFRDC.

DATE: Comment period expires (insert 45 days after publication date).

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ADDRESSES: A draft of certain elements of the solicitation package is available for public inspection and copying at the U.S. Nuclear Regulatory Commission, Public Document Room, 1717 H Street, N.W., Washington, D.C. 20555, telephone 202/634-3273. Copies can also be obtained from the Division of Contracts, Room 2223, 4550 Montgomery Avenue, Bethesda, MD 20814; or will be mailed upon written request to the Division of Contracts, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, ATTN: Ms. Mary Mace, Contract Negotiator. Comments should be submitted to the address immediately above.

FOR FURTHER INFORMATION CONTACT: Ms. Mary Mace, Contract Negotiator, Division of Contracts, U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone (301/492-4282).

SUPPLEMENTARY INFORMATION:

BACKGROUND

Under the Nuclear Waste Policy Act of 1982 (NWPA), the U.S. Nuclear Regulatory Commission (NRC) is responsible for licensing the construction, operation, and closure of facilities required for a high-level radioactive waste disposal system, which are to be designed, constructed, operated, and closed by the

U.S. Department of Energy (DOE). The facilities of the DOE waste disposal system will include mined geologic repositories; monitored retrievable storage (MRS) facilities or other interim storage measures; and transportation vehicles, casks and handling equipment.

NRC's high-level waste licensing program currently faces two critical problems with respect to contracted technical assistance and research. First, the continued use of contractors who also have a contractual relationship with DOE's high-level waste program, or with any other party who might be a participant in NRC's high-level waste licensing hearings, may give rise to an organizational conflict of interest situation, and may draw into question the independence and freedom from bias of the contractors' work and, consequently, of NRC's licensing decisions. According to the definition in 41 CFR 20-1.54, an "organizational conflict of interest" means that:

"...a relationship exists whereby a contractor or prospective contractor has present or planned interests related to the work to be performed under an NRC contract which (1) may diminish its capacity to give impartial, technically sound, objective assistance and advice or may otherwise result in a biased work product, or (2) may result in its being given an unfair competitive advantage."

Second, the long-term continuity of NRC's waste management technical assistance and research program over the next twenty years or more is threatened as a result of efforts to avoid organizational conflict of interest situations (contractors are required to choose between doing work for NRC's program or for DOE's much larger program) and by the possible recompetition of technical work. The loss of contractor expertise has a significant impact to NRC's technical program because of its evolving nature and NRC's need for contractor experts to appear as expert witnesses at adjudicatory hearings.

In light of the problems discussed above, the NRC believes that the long-term contractual support offered by a Federally Funded Research and Development Center (FFRDC) for waste management technical assistance and research is a potential solution for providing the special long-term contractual relationship needed by NRC in order to alleviate potential conflict of interest situations and provide long-term continuity.

NOTICE OF INTENT

This Notice of Intent indicates that NRC is considering the establishment and sponsorship of an FFRDC for waste management technical assistance and research as a solution to the problems of conflict of interest and long-term continuity. The FFRDC would be entitled, "The Center for Nuclear Waste Regulatory Analyses"

(hereinafter referred to as the "Center"). The publication of this Notice of Intent, however, is not a commitment on the part of NRC to establish and sponsor an FFRDC. Any final decision to do so must be approved by the Commission and be in compliance with Office of Federal Procurement Policy (OFPP) Letter No. 84-1, "Federally Funded Research and Development Centers" (April 4, 1984).

Technical assistance and research tasks to be performed by the Center would encompass the following general areas: (1) waste systems engineering and integration; (2) long-term performance of a geologic setting; (3) long-term performance of an engineered barrier system; (4) performance of an MRS and repository during operation; (5) special analytical evaluations; and (6) transportation, environmental impacts, and other areas related to the Nuclear Waste Policy Act.

The period of performance for the Center would extend throughout the duration of NRC's high-level waste licensing responsibilities (estimated to be twenty years or more). The period of performance for the contract to manage and operate the Center would be for five years (to be renewed every five years, subject to comprehensive review by the NRC). The level of effort for the first five years would build up from about 20-25 staff years during the first year to about 50 staff years during the fifth year and may increase by up to 50%, depending on program development and appropriations availability. ("Staff years" includes direct staff plus support staff.)

The NRC screening criteria for the Center are: (1) no conflict of interest with the high-level waste program; (2) operation of the Center as a not-for-profit organization free of control by any organization whose affiliations could give rise to conflict of interest; (3) capability to provide long-term continuity in resources to NRC throughout the duration of its high-level waste program under NWPA (e.g., 20 years or more); (4) multi-disciplined staff; (5) access to existing equipment and facilities (e.g., computational and experimental laboratories); (6) expertise in the areas of technical assistance and research identified above; and (7) capability to provide testimony by expert staff during NRC adjudicatory hearings.

A draft of certain elements of the solicitation package is available for public comment. The package includes a draft statement of work for operating the Center, draft proposal instructions and evaluation criteria, and mandatory requirements. The Commission is also requesting comments on specific questions included in this package. Final Commission approval to issue a solicitation package will be subject to review of the public comments on this draft solicitation package. Final Commission approval to establish and sponsor the Center will be subject to finding a highly qualified contractor to manage and operate the Center.

Dated at Bethesda, Maryland, this 6th day of March, 1986.

For the Nuclear Regulatory Commission.

A handwritten signature in cursive script, appearing to read "Victor Stello, Jr.", is written over a horizontal dashed line.

Victor Stello, Jr.
Acting Executive Director
for Operations