February 5, 1999

FOR: The Commissioners

FROM: William D. Travers /s/
Executive Director for Operations

SUBJECT: ORGANIZATIONAL CONFLICT OF INTEREST REGARDING DEPARTMENT OF ENERGY LABORATORIES

PURPOSE:

To inform the Commission, in accordance with SECY-98-003, of the extent to which alternate sources are available to assist the NRC in meeting its mission in the event that organizational conflict of interest (COI) considerations substantially inhibit its ability to use the Department of Energy (DOE EXIT) laboratories for such support. This situation could arise if either NRC obtains broad authority to regulate DOE activities or as a result of NRC's current authority to regulate a limited number of DOE activities.

ISSUE:

As NRC reviews applications already before the Commission in which DOE is the license applicant or holds an NRC certification (hereinafter referred to as licensee) and continues its pilot program to regulate selected DOE facilities, there is a risk that NRC may not have contractual sources that are free of organizational COI available to perform technical assistance and research.

SUMMARY:

In accordance with SECY-98-003, the staff conducted market research to determine the availability of commercial contractors and universities as potential alternate sources to assist the NRC in meeting its mission in the event that COI considerations substantially inhibit NRC's ability to use the DOE laboratories.

As a result of this market research, the staff determined that commercial sources should be available for most of NRC's needs in the event DOE laboratories could not continue to perform NRC work because of the existence of COI. Although these alternate sources exist, a more in-depth analysis of the potential for COI would be required on a project-by-project basis before placing the work with an alternate source. Market research did not produce viable alternate sources in 4[(1)] of the 28 technical areas assessed by the staff: "Digital Instrument and Control System's Technical Basis," "Fire Protection and Safety," "Radiation Damage," and "Fuel Behavior." The staff believes that current COI procedures, including the use of existing waiver authority, provide adequate means for addressing and neutralizing COI situations that may arise with respect to performance of most of this work by the DOE laboratories. However, this could require significantly more use of the waiver procedures than has been required in the past. In addition, there may be areas such as spent fuel storage facilities where expansion of the NRC's Federally Funded Research and Development Center (FFRDC) may be appropriate.

BACKGROUND:

Agency experience in addressing COI issues at the DOE laboratories has typically focused on isolated situations that NRC resolved by applying current procedures. Generally, when acceptable alternatives have been identified, work has been placed with private sector contractors or the FFRDC, the Center for Nuclear Waste Regulatory Analyses (CNWRA). For example, NRC placed work for spent fuel review assistance with the CNWRA after determining that the DOE laboratory that had been proposed to perform the work would have significant COI.

On November 21, 1997, the NRC entered into a memorandum of understanding with DOE to conduct a pilot program on external regulation of DOE facilities. If this pilot leads to increased regulation of DOE facilities by the NRC, the potential for COI with respect to work placed with the DOE laboratories is expected to proportionately increase. This potential COI, coupled with the increased potential for COI resulting from the current expansion of DOE laboratories into commercial markets, may limit NRC's ability to use DOE laboratory resources in the future.

In SECY-98-003, dated January 6, 1998, the staff identified alternatives to ensure that adequate resources will continue to be available to perform NRC work and committed to conduct a source assessment in parallel with the pilot program pertaining to DOE facilities to fully assess the availability of resources to perform NRC work.

DISCUSSION:

In April 1998, Source Assessment Teams (SATs) were established for all offices that might be impacted by either NRC's regulation of DOE activities or DOE's expansion of laboratory work into the commercial sector to review project statements of work and identify areas of concern. Each SAT was composed of a representative from the Office of Administration (ADM) and the Office of the General Counsel (OGC), and a technical expert from each of the following offices[(2)]: Advisory Committee on Reactor Safeguards (ACRS); Office for Analysis and Evaluation of Operational Data (AEOD); Office of Nuclear Regulatory Research (RES); Office of the Chief Information Officer (OCIO); Office of Human Resources (HR); Office of Nuclear Material Safety and Safeguards (NMSS); ADM/Division of Facilities and Security (DFS); Office of Nuclear Reactor Regulation (NRR); Office of State Programs (OSP); and Region IV.

The SATs for ACRS, OCIO, HR, OSP, and Region IV found that no current or planned projects would involve a potential COI in the event NRC regulation of DOE facilities was expanded. For each of these projects, the SATs determined that no potential for COI exists with respect to use of DOE laboratories because of the nature of the work requirements, for example, administrative support, training, international work, safeguards activities, review of commercial licensing applications and reports, collection of data (unrelated to the regulation of DOE, or with no analysis) and work for NRC and other agencies that is unrelated to the regulation of DOE facilities.

The SATs for AEOD, NMSS, NRR, RES, and ADM/DFS identified 28 technical areas in which DOE laboratories will have potential COI because of the expansion of regulation of DOE facilities by NRC and for which market research would be necessary to assess the availability of alternate sources if the work could not continue to be performed at the DOE laboratory. To identify potential commercial sources for these projects, a market research notice listing these 28 areas of interest (Attachment 1) was published in the Commerce Business Daily (CBD) through the Internet (CBDNET) on August 14, 1998, and September 3 and 25, 1998. This notice was linked to NRC's "Doing Business with the NRC" Web page, where background information on the potential expansion of regulation of DOE facilities and NRC's COI policies, as well as descriptions of all 28 areas of interest appeared. The notice also contained core questions for interested vendors so that the vendors could supply consistent information to supplement their capability statements. In addition, universities were provided a notice of the market research in an e-mail list of nuclear departments developed by RES.

NRC received 215 capability statements from 72 private-sector contractors and universities in response to the market research notice. A list of companies and universities submitting one or more capability statements is included as Attachment 2. Multiple capability statements were received for each of the 28 areas of interest. The staff limited its assessment to those firms that submitted capability statements. The capability statements were provided to all SAT members for review and information, and each SAT member was asked to ensure that his or her office completed an evaluation of the capability statements submitted for each area of interest identified by his or her office. SAT members reviewed each capability statement for technical viability and for potential COI.

The SATs completed their evaluations in December 1998. Summaries of evaluations for each area of interest are located in Attachment 3. Alternate sources were found to be available for 24 of the 28 areas of interest. No viable alternate sources were found for four research areas of interest ("Digital Instrument and Control Systems Technical Basis," "Fire Protection and Safety," "Radiation Damage," and "Fuel Behavior") and for one portion of the "Environmentally Assisted Cracking" area of interest (tests of highly irradiated materials). Because these and other research areas often are generic and may affect both commercial licensees and DOE laboratories, a contractor's prior work for a commercial licensee creates an increased risk for potential COI.

Under current procedures, when a COI issue pertaining to a DOE laboratory project is identified, the NRC staff must examine the facts to determine whether the COI can be avoided, or whether an alternate contract source should be sought. If a contract source is sought and all viable alternate contract sources have COI issues, the Contracting Officer (CO) must determine whether COI for those sources can be avoided. If the CO determines that COI cannot be avoided for any viable contract source, the NRC staff must determine whether an individual or class waiver should be sought for either the DOE laboratory or for alternate commercial source(s). If the staff determines that COI issues that cannot be avoided will constantly occur in an area of interest, a class waiver by the Executive Director for Operations may be sought. If the NRC staff determines that a class waiver will not suffice, legislative changes can be sought for these areas of interest to ensure that NRC's technical support needs will continue to be met.

Potential COI was identified for at least some companies and universities in 23 of the 24 areas of interest for which alternate sources are available. For seven of those areas of interest, all companies and universities that are viable sources have potential COI. These findings are not unexpected. It has been NRC's experience that in contracting for services in highly technical areas, some COI issues are likely to arise for at least some of the proposing companies and universities, primarily because of work previously performed for licensees or for NRC in support of regulation development. Further, when COI issues arise, a detailed review of the specific case may indicate that COI does not exist or can be avoided.

Methods for avoiding COI include expanding the NRC's FFRDC, which could provide needed assistance in at least two of the areas ("Design, Construction and Operation of Major Fuel Cycle and Possibly Other Major NMSS-Regulated Facilities" and "Quality Assurance and Quality Control") for which the CNWRA currently performs some NRC work. However, placing work with the CNWRA is limited by its charter. For example, the NRC may not be able to continue placement of certain work at the FFRDC which is outside of its charter under the industrial mobilization exception authorized by the Federal Acquisition Regulation.

Award of multiple contracts can further ensure that NRC's needs can be met. For example, one possible method of accommodating COI concerns when dealing with a number of commercial firms, some of which have the full spectrum of desired technical capabilities and some of which have many or only a few of the desired technical capabilities, is to award multiple task order type contracts. (These contracts would cover all of the desired categories of technical capabilities and all of the firms that demonstrate their ability to perform work in each category may receive awards.) NRC can then issue task orders after consideration of those firms holding the master contract, without the encumbrances of formal competitions and without the possibility of protest. This will allow NRC to have alternate sources readily available under contract to perform work as needed.

As soon as there is a clear expectation that expanded regulation of DOE facilities or DOE's involvement in the commercial market will adversely affect the NRC's ability to use the DOE laboratories, additional market research should be completed for any of the areas of interest in which no viable sources were found or in which all companies and universities were found to have probable COI. This additional market research will help confirm findings before other alternative measures are taken to ensure that NRC can obtain resources to meet its needs. If the only viable sources that can be located have significant COI, an individual or a class waiver may be sought under NRC's existing regulations to use either the laboratory or a commercial firm.[(3)]

CONCLUSION:

The staff's evaluation of capability statements submitted in response to market research demonstrates that commercial sources should be available for

24 of the 28 areas of interest if the work could not continue to be performed at a DOE laboratory. Although COI may be an issue for many of the companies and universities, current regulatory processes, including mitigation and individual waiver authorities(4), can be expected to be adequate to ensure that NRC's needs can be met for most of these areas of interest.

For other areas, further market research will be performed if the pilot project to review expanded regulation of DOE indicates that these areas will be affected. If further market research fails to locate viable sources, blanket waivers will be considered. If use of these processes will not ensure adequate sources to meet the NRC's needs, expansion of the NRC's FFRDC will be considered. If necessary, legislative changes can be sought to ensure that NRC's needs will continue to be met.

The staff proposes to use the existing waiver process to address COI concerns (Alternative 1 in SECY-98-003) and will continue to apply NRC's current COI procedures implementing Section 170A of the Atomic Energy Act to the work DOE performs for NRC.

COORDINATION:

This paper has been coordinated with OGC, which has no legal objection to its content. The Chief Financial Officer (CFO) and the Chief Information Officer have no objection to this paper. The CFO is cognizant that resource impacts will be evaluated and addressed on a case-by-case basis as the pilot project is completed.

RECOMMENDATION:

Staff requests action within 10 days. Action will not be taken until the SRM is received. We consider this action to be within my delegated authority as Executive Director for Operations.

William D. Travers
Executive Director for Operations

Contact: Mary Lynn Scott, ADM
301-415-6179

Attachments: As stated

ATTACHMENT 1

AREAS OF INTEREST

The following areas of interest were determined by the Source Assessment Teams (composed of program office, procurement, and legal staff representatives) through reviews of current, past, and future projects being performed by the DOE laboratories, and assuming that NRC would regulate DOE in all of these areas and that the form of regulation would be licensing:

Containment Integrity and Structural Aging

Criticality Safety (Assessment)

Decommissioning, Uranium Recovery, and Low-Level Radioactive Waste Disposal in a Geologic Setting

Design, Construction and Operation of Major Fuel Cycle and Possibly Other Major NMSS-Regulated Facilities

Digital Instrument and Control Systems Technical Basis

Electrical Engineering

Engineered Systems and Barriers for Protecting Public Health and Safety

Environmentally Assisted Cracking

Evaluation of the Operating Experience of Department of Energy Facilities

Fire Protection and Safety

Fuel Behavior

Human Performance

Licensing and Inspection of Power and Non-Power Reactors

Lower Head Integrity

Materials Criticality Safety

Mechanical Engineering

Performance Assessment of Department of Energy Facilities

Probability Risk Assessment Guidance Development, Risk Analysis Tools and Decisionmaking Under Uncertainties

Probability Risk Assessment Methods Development for Assessment

Quality Assurance and Quality Control

Radiation Damage

Radiation Safety Inspections and Evaluations

Radionuclide Transport and Decommissioning Research Program

Regulatory and National Environmental Policy Act Analysis and Documentation

Safeguarding of National Security Information and Restricted Data

Severe Accident Code Development, Validation and Maintenance

Steam Generator Integrity

Structural and Civil Engineering

Note: In SECY-98-003 (January 6, 1998), material control and accountability, threat assessment, and uranium enrichment were identified as areas for which it would be very difficult to find another contractor with the required skills and abilities that would not have a conflict of interest (COI). During the subsequent study, which is the subject of this paper, it has been determined that the expanded regulation of Department of Energy laboratories is unlikely to cause a COI issue. Therefore, these areas were not included in the market research.

ATTACHMENT 2

COMPANIES RESPONDING TO MARKET RESEARCH

ABS Integrated Services, Inc.
ADI Technology Corporation
Advanced Technologies & Laboratories International, Inc.
Alexander & Associates, P.A.
Attenuation Environment Company
Anatech Corp.
Applied Analysis Corporation
ASR International Corp.
BE, Inc.
Beardsley Design Assoc. (BDA)
Bregman & Company, Inc.
Brown & Company
CEN Corporation
Charles R. Jones
Clemson University
COMEX Corporation
Compa Industries, Inc.
Correlation Corp.
Designers & Planners, Inc.
Desmear Systems, Inc.
Diversified Engineering
Doris Minor
E3SI
Eagle Research Group, Inc.
ECO Systems
EI Review & Company, Inc.
Enercorp Federal Services
Energy Research, Inc.
Gamma Engineering Corporation
GANZY Communications, Inc.
Georgia Technical Research Institute
Global Environmental Strategies, Inc.
GRCI
H&R
HT Harvey & Associates
IntegraQEC
JSD and Associates
Jack Faucett and Associates
Johnson Bailey Henderson McNeel

Kansas State University
Kartek Environmental
Kenley Consulting
Labat, Inc.
Mark Group
McDermott Technology, Inc.
Mega-Tech, Inc.
MPRO, Inc.
Navarro Research and Engineering
Neoquest Technologies, Inc.
Noesis, Inc.
Ocean City Research Corp.
O'Donnell Consulting Engineers, Inc.
Pacific Science & Engineering Group
Quanti Sci, Inc.
Rick Johnson, Nuclear Engineer
Rod Rodriguez, Inc.
SEA, Inc.
S. Cohen & Associates (SCA)
SRI
SRI International
STI
Sonalysts
Sunrise Technologies, Inc.
Technology/Engineering Management, Inc.
Tetra Engineering Group, Inc.
The Nuclear Safety Research Center (NSRC) (Wisconsin)
UES, Inc.
University of Denver Research Institute
University of Wisconsin (Center for Human Performance in Complex Systems)
University of Wisconsin - CHPCS & NSRC
URS Greiner Woodward-Clyde (URS)
Vista Engineering

ATTACHMENT 3

SUMMARIES OF CAPABILITY STATEMENT EVALUATIONS

- Source Assessment Team Members:
- Containment Integrity and Structural Aging
- Criticality Safety
- Decommissioning, Uranium Recovery, and Low-Level Radioactive Waste Disposal in a Geologic Setting
- Design, Construction and Operation of Major Fuel Cycle and Possibly Other Major NMSS- Regulated Facilities
- Digital Instrumentation and Control Systems Technical Basis
- Electrical Engineering
- Engineered Systems and Barriers for Protecting Public Health and Safety
- Environmentally Assisted Cracking
- Evaluation of the Operating Experience of DOE Facilities
- Fire Protection and Safety
- Fuel Behavior
- Human Performance
- Licensing and Inspection of Power and Non-Power Reactors
- Lower Head Integrity
- Materials Criticality Safety
- Mechanical Engineering
- Performance Assessment of DOE Facilities
- Probability Risk Assessment Guidance Development, Risk Analysis Tools and Decisionmaking Under Uncertainties
- Probability Risk Assessment Methods Development for Assessment
- Quality Assurance and Quality Control
- Radiation Damage
- Radiation Safety Inspections and Evaluations
- Radionuclide Transport and Decommissioning Research Program
- Regulatory and National Environmental Policy Act Analysis and Documentation

- Safeguarding of National Security Information and Restricted Data
- Severe Accident Code Development, Validation and Maintenance
- Steam Generator Integrity
- Structural and Civil Engineering

SOURCE ASSESSMENT TEAM MEMBERS:
Mary Lynn Scott, Division of Contracts and Property Management, Office of Administration (ADM), and Brian Kildee, Office of the General Counsel (OGC), served on each Source Assessment Team (SAT). The following individuals represent their office as SAT members:

Office of Nuclear Regulatory Research (RES), Joseph Mate
Office of Nuclear Material Safety and Safeguards (NMSS), Gary Janosko
Office of Nuclear Reactor Regulation (NRR), Sheri Peterson
Office for Analysis and Evaluation of Operational Data (AEOD), William Jones
ADM/Division of Facilities and Security, Keith Everly

CONTAINMENT INTEGRITY AND STRUCTURAL AGING
The RES staff reviewed the capability statements of six companies and found that four were viable alternatives to the U.S. Department of Energy (DOE) laboratories. One of the four companies has a possible conflict of interest (COI).

CRITICALITY SAFETY
The NMSS staff determined that all companies that submitted capability statements would be able to provide the necessary technical assistance to NMSS in the area of criticality safety. The NMSS staff also determined that all of the sources had a significant potential for COI because of their extensive work histories at DOE nuclear facilities.

DECOMMISSIONING, URANIUM RECOVERY, AND LOW-LEVEL RADIOACTIVE WASTE DISPOSAL IN A GEOLOGIC SETTING
The NMSS staff determined that seven qualified private contractors appear to be available to conduct some or all aspects of work for NRC in the event DOE laboratories were not available. Three more contractors appear to be able to conduct a limited amount of work for NRC. None of the commercial sources that responded to the NRC market survey appear to have the extent of regulatory and environmental expertise that is available at some of the DOE laboratories. However, 1 of the 11 responding sources appears to be viable for all seven criteria identified by the staff, and 4 of the 11 firms demonstrated viable expertise in a majority of these criteria. These latter firms lacked expertise in mineralogy and also failed to demonstrate the capability to develop and to use 3-D technology to visualize and calculate the behavior of underground structures or of groundwater transport in various geologic settings.

For 6 of 11 responding firms, COI does not appear to be a problem. The one firm that was viable for all seven review criteria indicated that it had no COI in the past and expected to have no COI in any future work with DOE. Some firms indicated that they performed work for the U.S. Army Corps of Engineers and the U.S. Department of Defense, which maintain master material licenses with the NRC. Other firms intend to pursue work with the DOE in the next 2 years or have current contract work with a DOE laboratory. COI problems as a result of working for NRC licensees appear to be limited.

By and large, the firms responding to this request are small firms (fewer than 100 employees). A potential exists for a single firm's resources to become completely allocated to only a portion of NRC work, possibly resulting in resource competition among NRC programs. This potential competition among programs may be mitigated by considering other commercial firms or an expanded Federally Funded Research and Development Center (FFRDC) as potential contracting sources to complement commercial firms that are not viable for all review criteria.

DESIGN, CONSTRUCTION AND OPERATION OF MAJOR FUEL CYCLE AND POSSIBLY OTHER MAJOR NMSS- REGULATED FACILITIES
NMSS activities in the area of design and construction of major NMSS-regulated facilities, such as tank waste remediation system facilities, would not be significantly affected by the increased regulation of DOE facilities. NMSS is already using the Center for Nuclear Waste Regulatory Analyses (CNWRA) for technical assistance in this area for a number of program elements related to regulation of DOE nuclear facilities. Work in this area of interest that is not related to the CNWRA charter may fall under the Industrial Mobilization Exception (IME), but performance of this work under IME cannot be guaranteed. Because of pre-existing contractual agreements between the CNWRA and NRC pertaining to outside work, the NRC can be assured of a very low potential for COI.

In evaluating eight commercial sources other than the CNWRA, the NMSS staff found that three sources appear to have the organization, size, and large project experience necessary to provide technical assistance to NMSS. However, the staff also found that each of these three sources had a significant potential for COI.

DIGITAL INSTRUMENTATION AND CONTROL SYSTEMS TECHNICAL BASIS
The RES staff reviewed the capability statements of two companies and found that neither of the companies was a viable alternative to the DOE laboratories. Their capability statements did not demonstrate research experience.

ELECTRICAL ENGINEERING
The RES staff reviewed the capability statements of four companies and found that two were viable alternatives to the DOE laboratories. Both of the companies have a possible COI.

ENGINEERED SYSTEMS AND BARRIERS FOR PROTECTING PUBLIC HEALTH AND SAFETY
The NMSS staff judged that none of the eight companies that provided capability statements were capable of meeting all of NMSS' needs in this area of concentration; however, all of the applicants are capable of providing some support in some of the specific review areas. COI may exist as a result of other work performed for DOE laboratories. Work for this area of interest is currently performed by DOE laboratory staff and by the NRC's FFRDC, the CNWRA. One option is to award multiple task order type contracts to several companies to meet the diverse and competing engineering analysis needs

for this area of interest. If the NRC elects to engage a number of contractors in order to meet the engineering needs of NMSS, coordination will be necessary to avoid potential contradictions arising from reviews being performed by different contractor reviewers. Two other possible alternatives are to hire the appropriate expertise into the agency or to make a commitment to consider expanding the charter of the FFRDC.

ENVIRONMENTALLY ASSISTED CRACKING
The RES staff reviewed the capability statements of three companies and found that two were generally viable alternatives to the DOE laboratories: however, neither company was a viable source for the testing of highly irradiated materials. Both of the companies have a possible COI.

EVALUATION OF THE OPERATING EXPERIENCE OF DOE FACILITIES
The AEOD staff determined that if NRC needed commercial contractor assistance with the development, implementation, or other aspect of a DOE facility operating experience review program, it could be obtained from outside commercial sources.

The AEOD staff reviewed the capability statements of 17 companies for this area of interest. Eight of the 17 entities appear to be viable providers of assistance on evaluation of the operating experience at DOE facilities, 4 entities may be of limited help to NRC in evaluating operating experience at DOE facilities, and 5 entities are not viable.

Of the eight entities that appear viable, five would require additional evaluation to make a definitive determination regarding COI. For the other three viable entities, the AEOD staff found no apparent COI issues. For the five viable entities with possible COI issues, there is a high likelihood that a detailed evaluation of additional information closer to the time of actual need would eliminate COI issues for at least some of these entities.

FIRE PROTECTION AND SAFETY
The RES staff reviewed the capability statements of seven companies and found that none of the companies were viable alternatives to the DOE laboratories. These companies had experience primarily in non-research studies and design.

FUEL BEHAVIOR
The RES staff reviewed the capability statements of five companies and found that one was technically qualified. Because this company currently performs similar work for licensees, however, there would be a direct COI for research that affects both DOE facilities and commercial licensees. Therefore, the staff does not consider this company to be a viable candidate.

HUMAN PERFORMANCE
The RES staff reviewed the capability statements of 11 companies and found that 4 were viable alternatives to the DOE laboratories. One of the four companies has a possible COI.

LICENSING AND INSPECTION OF POWER AND NON-POWER REACTORS
The NRR staff identified 12 commercial sources available in at least a limited number of technical areas of expertise. Some of the best sources identified were technically qualified in a variety of areas; however, they also posed COI concerns since they worked extensively for our licensees or performed work for DOE. If NRR is not able to use a DOE laboratory for work in this area because of COI concerns, it would most likely not be able to find replacement expertise in commercial sources that do not also have COI concerns.

LOWER HEAD INTEGRITY
The RES staff reviewed the capability statements of three companies and found that two were viable alternatives to the DOE laboratories. Both of the companies have a possible COI.

MATERIALS CRITICALITY SAFETY
The RES staff reviewed the capability statements of six companies and found that four were viable alternatives to the DOE laboratories. One of the four companies has a possible COI.

MECHANICAL ENGINEERING
The RES staff reviewed the capability statements of eight companies and found that one was a viable alternative to the DOE laboratories. This company has a possible COI, however, because of previous and on-going work for the regulated industry.

PERFORMANCE ASSESSMENT OF DOE FACILITIES
The AEOD staff determined that if NRC needs outside assistance with the development, implementation, or another aspect of a DOE performance assessment program, assistance could be obtained from outside commercial sources.

The AEOD staff reviewed the capability statements of 12 entities for this area of interest. Six of the 12 entities appear to be viable to assist with performance assessment of DOE facilities, 2 entities may be of limited help to NRC in performing performance assessments of DOE facilities, and 4 are not viable.

Of the six entities that appear viable, four would require additional evaluation to make a definitive determination regarding COI. For the other two viable entities, the AEOD staff found no apparent COI issues. For the four viable entities with possible COI issues, there is a high likelihood that a detailed evaluation of additional information closer to the time of actual need would eliminate COI issues for at least some of these entities.

PROBABILITY RISK ASSESSMENT GUIDANCE DEVELOPMENT, RISK ANALYSIS TOOLS AND DECISIONMAKING UNDER UNCERTAINTIES
The RES staff reviewed the capability statements of five companies and found that five were viable alternatives to the DOE laboratories. Four of the five companies have a possible COI.

PROBABILITY RISK ASSESSMENT METHODS DEVELOPMENT FOR ASSESSMENT
The RES staff reviewed the capability statements of 10 companies and found that two were viable alternatives to the DOE laboratories. One of the two

companies has a possible COI.

QUALITY ASSURANCE AND QUALITY CONTROL

NMSS has used and is using the CNWRA for technical assistance in quality assurance/quality control (QA/QC) related to the regulation of DOE nuclear facilities. New QA/QC work that falls within CNWRA's charter can be performed by the CNWRA. However, performance of new QA/QC work that falls under IME cannot be guaranteed. Because of existing contractual agreements between the CNWRA and the NRC pertaining to outside work, the NRC can be assured that the CNWRA has a very low potential for COI.

In the staff's evaluation of 14 commercial QA/QC sources (CNWRA excluded), it found that 10 of the 14 appeared to have the organization, the size, and the experience needed to provide some level of QA/QC assistance to NRC. However, the NMSS staff was unable to rule out the possibility of a potential COI for 6 of these 10 entities, because they provided information indicating there could be a COI.

RADIATION DAMAGE

The RES staff reviewed the capability statements of five companies and found that none of the companies are viable alternatives to the DOE laboratories. The staff found that the capability statements did not demonstrate the stated experience. Also, the staff found that none of the companies had facilities for testing irradiated materials.

RADIATION SAFETY INSPECTIONS AND EVALUATIONS

The NMSS staff found a sufficient number of private contractors available to conduct radiation safety evaluations, but none of the responding firms were able to conduct inspections. All five of the responding firms demonstrated expertise in performing radiation safety evaluations. For most of the responding firms, COI did not appear to be a problem. Two of the responding firms did not address COI, while the remaining three did not identify any current or potential COI.

NRC regulation of DOE facilities is not expected to severely affect NRC's ability to conduct its current activities. The only activity that is now being conducted under a DOE contract for which NMSS staff could not identify any alternative source is cytogenetic testing. This activity involves blood testing to estimate the level of radiation exposure. This test is used very infrequently, possibly once a year or less, and only in case of suspected accidental high-radiation exposure. It may be possible to find another facility that is capable of performing this type of test, but none is currently known. Because this activity is in the nature of emergency assistance, it may still be possible to use the DOE facility. There are precedents in which NRC has requested the assistance of one or more of its licensees during an emergency situation because these licensees possessed the needed capabilities.

The lack of viability of the responding firms for the conduct of radiation safety inspections is puzzling. In practice, the expertise needed to perform radiation safety evaluations is the same as that required to conduct inspections. Either there is no interest in performing inspections or the respondents failed to focus on that portion of the interest request. A subsequent request for interest in the Commerce Business Daily (CBD), that specifically focused on radiation safety inspection experience will likely identify available expertise.

By and large, the firms responding to this request are small firms (fewer than 100 employees). A potential exists for a single firm's resources to become completely allocated to only a portion of NRC work, potentially resulting in resource competition among NRC programs. This potential competition among programs may be mitigated by considering an expanded FFRDC as a potential contracting source in addition to viable commercial firms.

RADIONUCLIDE TRANSPORT AND DECOMMISSIONING RESEARCH PROGRAM

The RES staff reviewed capability statements of seven companies and found that five were viable alternatives to the DOE laboratories. Two of the five companies have a possible COI.

REGULATORY AND NATIONAL ENVIRONMENTAL POLICY ACT ANALYSIS AND DOCUMENTATION

The NMSS staff found a sufficient number of qualified private contractors available to conduct work for NRC in the event DOE laboratories were not available. While no source evaluated can match the extent and depth of regulatory and environmental analysis expertise and experience available at some DOE laboratories, enough qualified private contractors were identified in this source survey to fill NRC's needs. At least three sources examined in this survey have the capability of conducting a complete major Environmental Impact Statement (or regulatory analysis) without the need for extensive subcontracting. In addition, at least four potential contractors are qualified to conduct limited portions of these types of analyses and could be used as part of a team effort, perhaps as subcontractors. These contractors lacked expertise in civil/structural engineering and in environmental/transport issues in all media.

For most sources, COI does not appear to be a problem. Five of the 13 sources reviewed had potential COI problems, mainly because of their work for DOE, either directly or as a subcontractor. Only a few of the sources examined perform a significant part of their work for NRC licensees either as a contractor or as a subcontractor. COI problems resulting from working for licensees are few.

The three sources that are qualified to conduct large-scale regulatory and environmental analysis can work over a wide range of subject areas without extensive subcontracting, and they probably have no potential COI problems.

SAFEGUARDING OF NATIONAL SECURITY INFORMATION AND RESTRICTED DATA

The Division of Facilities and Security (DFS), ADM, is currently contracting with DOE's Pacific Northwest National Laboratory (PNNL) to perform certain tasks related to the protection of classified information at the facilities of certificate holders and licensees and other facilities subject to the requirements of 10 CFR Part 95. If NRC's increased regulation is extended to safeguards and security functions at DOE nuclear facilities, a COI will exist. However, the DOE's Advisory Committee on External Regulation recommends that NRC only regulate nuclear safety at these facilities. This issue has yet to be decided.

With respect to viable alternatives to PNNL, it appears that adequate commercial sources are limited. On the basis of the six responses to the technical capabilities statement recently published in the CBD, only one response appeared to be a viable alternative that posed no potential COI.

SEVERE ACCIDENT CODE DEVELOPMENT, VALIDATION AND MAINTENANCE
The RES staff reviewed the capability statements of six companies and found that two were viable alternatives to the DOE laboratories. One of the two companies has a possible COI.

STEAM GENERATOR INTEGRITY
The RES staff reviewed the capability statements of three companies and found that one company was viable alternative to the DOE laboratories but has a possible COI because of past work for the regulated industry.

STRUCTURAL AND CIVIL ENGINEERING
The RES staff reviewed the capability statements of seven companies and found that two were viable alternatives to the DOE laboratories. One of the two companies has a possible COI.

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1. SECY-98-003 previously identified "Standardized Computer Analysis for Licensing Evaluation" (SCALE), a criticality code, as a specific project for which the level of expertise provided by the DOE laboratory is not available elsewhere. The staff also determined during the assessment that alternate sources are not available specifically for the testing of highly irradiated materials, a specific project within the "Environmentally Assisted Cracking" area of interest.

2. The ADM staff also contacted the staff of the Office of International Programs (OIP) and determined that OIP projects at DOE involve international work which will not create COI.

3. The above analysis, as well as the capability statement evaluations summarized in Attachment 3, are based on the premise that Section 170A of the Atomic Energy Act and NRC's implementing regulations will continue to govern NRC activities in this area. However, if Congress revises Section 170A as a result of this study and the pilot project or for any other reasons, this premise may no longer apply. Also, future DOE decisions on whether to seek an NRC license for DOE or contractors operating its laboratories, as well as future NRC decisions concerning financial accountability of licensees (which could make DOE accountable when its contractors operating DOE laboratories are NRC licensees), may affect NRC's analysis of COI considerations.

4. The CO determines if it is necessary to seek a waiver for specific contract awards, with the advice and concurrence of the program office director and legal counsel. Upon the recommendation of the Senior Procurement Executive, and after consultation with legal counsel, the Executive Director for Operations may waive the policy in specific cases if he determines that it is in the best interest of the NRC to do so. Waiver action is strictly limited to those situations in which (1) the work to be performed under contract is vital to the NRC program, (2) the work cannot be satisfactorily performed except by a contractor whose interests give rise to a question of COI, and (3) contractual and/or technical review and surveillance methods can be employed by the NRC to neutralize the conflict.