- Identification of administrative support personnel and/or facilities needed to assist professional personnel in completing work.

- **An Organizational Conflict of Interest Disclosure**:

  (a) Provide descriptions of present/planned/past work for other organizations, in the same/similar technical area as the NRC project scope of work, e.g., (included but not limited to), NRC licensees, vendors, industry groups or research institutes that represent or are substantially comprised of nuclear utilities.

  (c) Provide name of organization, dollar value, and period of performance of the work identified in (a) above.

  (Please see the section entitled "Conflict of Interest" in the attached SOW for additional information.)

- A discussion of anticipated problem areas or deviations from the NRC's SOW.

This request is not an authorization to begin work. Such authorization will be provided via an NRC Form 173, "Standard Order for DOE Work."

Work under this project is anticipated to be unclassified.

The proposal should be sent to the NRC within 21 days after receipt of this request. Please advise the individual mentioned below by telephone if there is any difficulty in meeting this due date.

An original and two copies of the proposal should be sent to the NRC, Attn: Penelope Kinney, NMSS, Mail Stop E1-D2M, Washington, DC 20555.

Questions concerning this request should be addressed to Penelope Kinney on (301) 492-3248. Thank you for your assistance in this matter.

Sincerely,
Mark J. Flynn, Director
Program Planning, Budgeting
and Program Analysis Staff
Office of Nuclear Material Safety
and Safeguards

Enclosure: as stated
cc: S. Bowman, ORNL (fax)
J. Simpson, ORNL (fax)
Distribution:

NMSS r/f	EHeumann
J5645	KStout
JCook	PKinney

OFC	PBPA	SFST	PBPA	PBPA	PBPA
NAME	PKinney PK	JCook	KStout KMS	KFitch kmf	for MJFlynn kmf
DATE	07/10/09	7/16/09	7/16/09	7/17/09	7/17/09

- Identification of administrative support personnel and/or facilities needed to assist professional personnel in completing work.

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DATE	07/10/09	7/16/09	7/16/09	7/17/09	7/17/09

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 5, 2009

Mr. James A. Reafsnyder
DOE-ORO Work for Others
Attn: Ms. Teresa R. Hope
P.O. Box 2001, MS-M6.1
Federal Building
Oak Ridge, TN 37831

SUBJECT: NRC PROJECT ENTITLED, "INTERNATIONAL AND DOMESTIC TRANSPORTATION SAFETY REGULATORY PROGRAM SUPPORT" JOB CODE NUMBER J5645

Dear Mr. Reafsnyder:

This letter is to request a proposal for performance of the enclosed statements of work (SOW) for Job Code J5645 for the Nuclear Regulatory Commission (NRC), Office of Nuclear Material Safety and Safeguards (NMSS). The work required is described in the enclosed SOW and should be used as the basis for proposal preparation.

Cost Proposal

The proposal should contain the cost information as is required on the NRC Form 189, "DOE Laboratory Project and Cost Proposal for NRC Work."

A spending plan should also be submitted as part of your cost proposal. Guidance for completion of the plan is contained in the instructions portion of the NRC Form 189. **The spending plan will enable personnel to track costs and technical progress against the projected spending and percentage of completion for the project. Consequently, the spending plan should contain a projection of the level of cost expenditure that is as accurate as possible, given all currently available information (i.e., costs should not be straight-lined as a matter of convenience).**

Technical Proposal Content

As a minimum, the technical proposal must contain the following:

- A discussion to substantiate the laboratory's understanding of the scope of work.
- A discussion of the laboratory's technical approach to meet the project's objective.
- A discussion of the experience and capabilities of key personnel and the laboratory in performing similar work.
- Identification of key personnel and the number of staff hours that will be committed to completion of work. Resumes for key personnel must be included.

- Identification of administrative support personnel and/or facilities needed to assist professional personnel in completing work.

- **An Organizational Conflict of Interest Disclosure:**

  (a) Provide descriptions of present/planned/past work for other organizations, in the same/similar technical area as the NRC project scope of work, e.g., (included but not limited to), NRC licensees, vendors, industry groups or research institutes that represent or are substantially comprised of nuclear utilities.

  (b) Provide name of organization, dollar value, and period of performance of the work identified in (a) above.

  (Please see the section entitled "Conflict of Interest" in the attached SOW for additional information.)

- A discussion of anticipated problem areas or deviations from the NRC's SOW.

This request is not an authorization to begin work. Such authorization will be provided via an NRC Form 173, "Standard Order for DOE Work."

Work under this project is anticipated to be unclassified.

The proposal should be faxed to the NRC within 21 days after receipt of this request. Please advise the individual mentioned below by telephone if there is any difficulty in meeting this due date.

An original and two copies of the proposal should be sent to the NRC, Attn: Penelope Kinney, NMSS, Mail Stop E1-D2M, Washington, DC 20555.

Questions concerning this request should be addressed to Penelope Kinney on (301) 492-3248. Thank you for your assistance in this matter.

Sincerely,

for Mark J. Flynn, Director
Program Planning, Budgeting
and Program Analysis Staff
Office of Nuclear Material Safety
and Safeguards

Enclosure: as stated

cc: S. Bowman, ORNL (fax)
J. Simpson, ORNL (fax)

STATEMENT OF WORK

Project Title:	International and Domestic Transportation Safety Regulatory Program Support
Job Code Number:	J5645
B&R No.:	95015366270
Technical Project Manager (TPM):	John Cook, SFST, (301) 492-3318
Technical Assistance Project Manager (TAPM):	Penny Kinney, PBPA, (301) 493-3248
Performing Organization:	Oak Ridge National Laboratory (ORNL)
Fee Recoverable:	No

1.0 Background

The roles of the Department of Transportation (DOT) and the Nuclear Regulatory Commission (NRC) in the regulation of the transportation of radioactive materials were described in a memorandum of understanding (MOU) signed on June 8, 1979. Generally, the DOT is responsible for regulating safety in transportation of all hazardous materials, including radioactive materials, and the NRC is responsible for regulating safety in receipt, possession, use, and transfer of byproduct, source, and special nuclear materials. The NRC reviews and approves or denies approval of package designs for fissile materials and for other radioactive materials (other than low specific activity materials) in quantities exceeding Type A limits, as defined in 10 CFR Part 71.

The MOU recognizes DOT as the national competent authority with respect to the administrative requirements set forth in the regulations for the Safe Transport of Radioactive Materials of the International Atomic Energy Agency (IAEA). Under the MOU, the NRC is responsible for providing to the national competent authority (DOT) technical support and advice pertaining to the transportation of radioactive materials.

The DOT also acts as the representative of the United States to the IAEA and other international groups on matters pertaining to the administrative and safety regulatory aspects of the transportation of radioactive materials. Under the MOU, the NRC is responsible for providing technical support and advice to the DOT in this capacity.

The American National Standards Institute (ANSI) N14 Committee engages in the development of industry standards that benefit radioactive material packaging and transportation safety. NRC is supporting the continuing operation of this Committee to preserve accrual of these safety benefits to the transport community.

NRC engages in research activities to support the international and domestic transportation safety regulatory program. Therefore, the NRC requires technical support in this regard.

2.0 Objectives

The objective of this agreement is to support NRC's safety mission in the transportation of radioactive materials. Specific support activities required include the following:

- Development, review and revision of international (e.g., IAEA) transportation safety regulations and guidance, including development, review and comment of related documents, participation in Coordinated Research Projects (CRP), international meetings or conferences, or other activities.

- Development, review and revision of domestic transportation safety regulations and guidance, other supporting documents and activities, including those addressed in the DOT/NRC MOU.

- Development, evaluation or review of transportation environmental impacts, including statements and assessments, and expert peer review of NUREGS and other reports.

- ANSI N14 Committee activities.

3.0 Purpose

The purpose of this agreement is to obtain the technical assistance necessary for the NRC to satisfy transportation safety programmatic needs. Since the NRC provides significant support for international and domestic transportation safety regulation, specialized technical assistance in fulfilling its obligations is required. This includes support for compatible or adjunct domestic transportation safety regulatory activities. The assistance needed under this agreement is recurring; however, specific needs in terms of subject area or level of effort required cannot be entirely forecast in advance. Therefore work will be included under tasks or additional tasks will be incorporated as needs develop.

4.0 Expertise and Disciplines Required

The performing organization shall assure that the principal investigator is a nationally and internationally recognized radioactive material technical expert. The principal investigator shall be a scientist or engineer with in-depth experience in IAEA, DOT and NRC transportation safety and security responsibilities, internal organizations and their functions and rulemaking activities. In particular, this individual shall have had experience in the development of current and previous IAEA, DOT, and NRC transportation safety and security regulations and guides. The principal investigator shall have demonstrated recent IAEA experience and must possess outstanding oral and written communication skills.

A Peer Review Panel of Experts is described in Section 5 below. The Panel member's, nationally and/or internationally recognized, shall possess experience with structural, mechanical, thermal, materials, spent fuel composition and behavior, finite element modeling, and analytical codes such as PRONTO, PRESTO, and MELCOR and transportation risk assessment codes including RADTRAN and RISKIND.

5.0 Work to be Performed

The principal investigator shall either perform or provide technical oversight and continuity for all work performed on this project.

All work under this agreement will be assigned on a task basis. The assistance needed under this agreement is recurring; however, specific needs in terms of subject area or level of effort required cannot be entirely forecast in advance. Currently the NRC has identified work under the following tasks. Additional tasks with work requirements or revisions to the tasks below will be incorporated via modifications to this agreement as new needs arise. Proposals will be requested for any new work.

Task 1. International Transportation Safety
ORNL shall develop draft revisions and review and comment on proposed revisions to the international (e.g., IAEA) radioactive material transportation safety regulations, guidance and related documents. ORNL shall also prepare materials for and participate in CRP, international meetings or conferences, or other activities. ORNL shall provide support for international regulatory and guidance changes related to radioactive material transportation safety and security, including preparation of rule and guidance text and impact assessments for Subtasks 1 and 2 below.

Subtask 1. Package surface contamination support

A proposal for package surface contamination limits has been developed for TRANSSC that is dose-based, radionuclide-specific, and provides relief for SNF package surface contamination, yet still retains the 4 Bq/cm^2 (beta and gamma emitters) and 0.4 Bq/cm^2 (alpha emitters) values for those member states with commitments to that value. This task involves coordination among parties including the United Kingdom's (U.K.) Health Protection Agency (HPA) and member states to confirm dose-based contamination limit values and capping rules. The practicality and complexity (or ease of) implementing the recommendations and methodology proposed for this proposal should be addressed. The evaluation should include identification and resolution of possible issues and problems. The results of these analyses shall be presented in letter reports, technical papers and presentations as needed to support the presentation of results to IAEA and other forums.

Subtask 2. Naturally Occurring Radioactive Material (NORM)

The apparent double standard related to exemptions for shipments of natural ores or NORM as compared with materials that are intended to be processed for their radionuclides shall be evaluated under this subtask and the basis for a similar exemption for material with equivalent risk shall be developed by ORNL. Evaluation results shall be provided in letter reports and submitted to the NRC TPM. This subtask includes detailed analysis of the exposure scenarios and treatment of daughter products in setting the exemption values, particularly to determine if the exposure scenarios are appropriate for: Th-natural, U-natural, a mixture of radionuclides representative of pipe scale, and a mixture of radionuclides typical of a rare earth ore. ORNL shall determine if there is any adequate risk-basis or other bases for differentiating between materials that are intended for processing to use their radionuclides and other materials, taking the daughter products into account in both cases.

ORNL shall provide support for NRC participation in the IAEA CRP on exemptions for low level materials. Technical analysis shall be performed as described in the U.S. proposed research agreement entitled "Evaluation of Public and Worker Doses due to the Transport of Low Level Material." This effort includes preparing for and participating in one or more foreign meetings related to the CRP. Results shall be documented and reported to the IAEA CRP and may include one foreign trip.

Subtask 3. A_1/A_2 values

The general transportation safety aspects for radioactive materials in transit shall be reviewed by reconsideration of the A1/A2 values, based on revision of ICRP dose coefficients and other factors. This work may also include review and possible revision of the Q-system, and contributing to the development of computer codes to calculate A_1/A_2 values. This subtask may require coordination with the U.K. HPA. ORNL shall provide support for international regulatory and guidance changes regarding A_1/A_2 and exemption values, including preparation of rule and guidance text and impact assessments. One foreign trip may be required to support this subtask.

Task 2. Domestic Transportation Safety
ORNL shall develop, review and revise domestic radioactive material transportation safety regulations and guidance, and other supporting documents and activities, including those addressed in the DOT/NRC MOU.

Subtask 1. ORNL shall support current NRC rulemaking activity for compatibility changes to 49 CFR and 10 CFR and for other domestic regulatory changes, including preparation of rule and guidance text and impact assessments.

Subtask 2. ORNL shall update and provide laminated charts that summarize domestic radioactive material transportation safety requirements for NRC and state inspectors.

Subtask 3. ORNL shall update NUREG-1660 "U.S.-Specific Schedules of Requirements for Transport of Specified Types of Radioactive Material Consignments" (January 1999) based on the most recently published IAEA Schedules and DOT regulations.

Task 3. Transportation Impact Assessment
ORNL shall develop, evaluate or review transportation environmental impacts, including statements and assessments, and conduct expert peer review of NUREGs and other reports.

Subtask 1. Expert Peer Review of Draft NUREG on Spent Fuel Transportation Risk

ORNL shall convene a panel of internationally recognized experts on spent fuel transportation to review, assess, and provide comment on the Sandia National Laboratory (SNL) Draft NUREG on Spent Fuel Transportation Risk Assessment, and, at request of the NRC TPM, review and provide comment on SNL proposed responses to public comments on the Draft NUREG. The panel member's areas of expertise shall include structural, mechanical, thermal, materials, spent fuel composition and behavior, finite element modeling, analytical codes

including PRONTO, PRESTO, and MELCOR and transportation risk assessment codes including RADTRAN and RISKIND.

The Panel shall commence its review of the Draft NUREG once the document has been provided by the NRC TPM. The Panel shall consider previous related efforts for background and context for its review. In conducting its review, the Panel shall determine whether the assumptions are appropriate and whether the results are accurate, and may include verification of input and output values. Full confirmatory analyses are not required but may be performed if deemed necessary. The Panel shall comment on the Draft NUREG technical bases, assumptions, summaries, results and comparisons, including identification of any errors of commission or omission. Text clarity, cohesiveness, conciseness, and overall accessibility to content for members of the public, including the layout, figures, tables and diagrams must also be addressed. An overall assessment of comments pertaining to individual factors or values that could understate or overstate actual likely spent fuel transportation risks shall be discussed. Members of the Panel shall participate in a meeting at SNL to identify, discuss, and resolve comments on the Draft NUREG. Assistance from the Panel may be required to support a public meeting on the Draft NUREG. If this support is necessary the NRC TPM will request assistance at least sixty calendar days in advance of the meeting.

At the direction of the NRC TPM, the Panel may also be asked to review and comment on SNL's proposed responses to public comments to ensure comments have been appropriately binned and/or combined, that issues have been properly characterized and/or summarized, and that responses are clear, complete, and have a sound technical bases. The Panel shall provide its comments to the NRC TPM.

Subtask 2. Transportation Incident Database

ORNL shall determine the feasibility of developing and maintaining a capability to produce U.S. data entry to IAEA's EVTRAM, and produce reports on annual U.S. radioactive material transportation incidents and accidents. This subtask has the following three subtasks:

Subtask 2.1. Conduct a scoping study to determine the requirements to establish the database: 1) examine data needs; 2) identify data resources; and 3) identify/resolve compatibility issues and other potential problems. Issues to address include how to expand/supplement the 40 data fields collected in Hazardous Materials Incident Reports (HMIR) to satisfy the 80 data fields requested by IAEA. Once identified, proposed solutions to those issues shall be developed. Also, for accidents involving Type B or fissile packages, approaches shall be identified on how to collect information on accident forces that currently are not captured by DOT or IAEA. The Department of Energy's Transportation's Radioactive Material Incident Reports (RMIR) and the Nuclear Material Event Database (NMED) should be considered as possible starting points. (Note: no actual data collection, analysis, etc. is to be conducted in this phase); and 4) provide an estimate of the costs to establish and maintain a database annually.

Subtask 2.2. Establish a test database using input from information provided to DOT via HMIR and other sources as identified in Phase 1. Provide presentation on test results to the TPM.

Subtask 2.3. Upon NRC approval, conduct ongoing effort to collect the incident information and add it to the database, provide the U.S. input to EVTRAM electronically, and prepare annual summary reports as a metric of radioactive material transport safety.

Task 4. Development of National Consensus Standards

ORNL shall ensure the operation of the N14 Committee as an American National Standards Institute (ANSI) accredited Standards Development Organization. N14 shall develop and maintain ANSI approved standards for the packaging and transportation of radioactive material, including spent nuclear fuel.

The N14 Committee shall perform specific activities to ensure the continued functioning and accreditation of N14. Specifically, N14 shall continue to:

1. Provide management and administrative functions required for all N14 proper initiation of new standards projects; circulating standards for balloting; ensuring proper handling of balloting results and comment resolution; formal submission of approved standards to ANSI for final compliance with these procedures; and performing other activities required to maintain N14's accredited status with ANSI;
2. Assist ANSI in the performance of periodic audits of N14, including providing records and information as needed;
3. Organize and host the annual N14 Committee and N14 Management Committee meeting;
4. Initiate the development of new standards or the revision of existing standards that are of particular interest to governmental and industry bodies involved in spent fuel packaging and transportation activities;
5. Provide easy access to N14 standards, both electronically and in print; and
6. As requested by the NRC TPM, initiate the development of specific standards related to spent fuel packaging and transportation.

The N14 Committee shall be continued as an ANSI accredited Standards Development Organization. N14 shall:
1. Respond to ANSI audit findings, identify any revisions needed to its operating procedures, and implement these revisions;
2. Ensure the timely revision and maintenance of standards related to radioactive material packaging, particularly those related to spent fuel transportation;
3. Establish web-based access to the N14 standards;

ORNL shall prepare all draft and final products in an appropriate format. All reports shall be edited and reviewed by ORNL and checked in accordance with the quality assurance requirements addressed under Section 13. Within the schedule identified under Section 6 and after receipt of NRC comments, the performing organization shall revise the draft report, incorporate the resolution of comments, and submit a camera-ready copy and an NRC-compatible, electronic media copy of the final report.

6.0 Deliverables and Schedule

The deliverables required under each subtask with the anticipated time for delivery are provided below. All deliverables shall be provided to the NRC TPM and the TAPM.

Task 1. International Transportation Safety
Subtask 1 (Contamination)
Provide response to comments on the IAEA change proposal on package surface contamination limits in TS-R-1 and related guidance in TS-G-1.1 (dates to be determined by the IAEA). Any operational or implementation issues shall be identified and resolved.

Subtask 2 (NORM)
Prepare for and participate in the 3rd Research Coordination Meeting of the NORM Coordinated Research Project at the IAEA Headquarters in Vienna (November 2009). Complete development and execution of the U.S. (NRC) NORM research plan, and provide a letter report on the effort by December 31, 2009. Provide responses to member state comments on the IAEA change proposal regarding NORM exemption limits in TS-R-1 and related guidance in TS-G-1.1 (dates to be determined by the IAEA). Any operational or implementation issues shall be identified and resolved.

At the direction of the NRC TPM, support a consultants meeting (date to be determined by IAEA) to prepare a final report on the CRP.

Subtask 3. (A_1/A_2 values)
Provide a letter report summarizing revised A_1/A_2 values, other work completed, and any codes developed. Work not yet started; dates TBA.]

Task 2. Domestic Transportation Safety
Subtask 1. (Domestic rules) Provide rule and guidance text, impact assessments and supporting materials on the schedule to be established by the NRC's Office of Federal and State Materials and Environmental Management Programs (FSME).

Subtask 2. (Charts) Provide updated laminated charts summarizing NRC and DOT transportation safety regulations by June 30, 2010.

Subtask 3. (Schedules) Provide final copy of domestic transportation schedules by September 30, 2010.

Task 3. Assessment Transportation Impact
Subtask 1. (Peer review)

At the direction of the NRC TPM, provide Peer Review comments on the draft SNL responses to public comments on Draft SFTRA NUREG in a letter report.

The following table provides an estimate of the dates and periods for the Peer Review Group NUREG review and comment related activities. The dates and sequence of these activities are subject to change.

Revised draft NUREG to NRC	12/18/09
NRC comments to SNL	2/12/10
Peer review (ORNL)	**3/8 – 7/20/10**
NRC provides Rev 1 draft NUREG to peer review group	**3/8/10**
Peer review group questions to SNL	**4/30/10**

SNL presentation to peer review group	**5/3-4/10**
Peer review preliminary findings	**6/1/10**
Peer review clarifications	**6/8/10**
Peer review final findings	**7/6/10**
SNL provides Rev 2 draft NUREG	**7/20/10**
Publish Draft & Public comment	9/1 – 11/2/10
Final draft NUREG to NRC	1/11/11

Subtask 2. (Transportation Incident Database)

Subtask 2.1. Provide a scoping study, including a description and resolution of data collection/database issues.

Subtask 2.2. Provide a test database, including a presentation/demonstration.

Subtask 2.3. Provide database, data updates, data input to the IAEA, and summary reports of transportation incidents.

Provide letter status report of all 3 subtasks by November 15, 2011.

Task 4. Development of National Consensus Standards
Provide management and administrative functions. This includes hosting meetings, conducting audits, and providing access to N14 Committee Standards and documents. This is an ongoing task, with a continuing annual level of effort. The TPM may audit meetings of N14, and/or its partner organization, the Institute of Nuclear Materials Management (INMM), to monitor progress and outcomes.

7.0 Period of Performance

The period of performance for this project commences on the date of execution of the agreement and shall continue until November 30, 2011.

8.0 Estimated Level of Effort

The estimated level of effort for this project is identified below.

Task 1. 14 staff weeks

Task 2. 13 staff weeks

Task 3. 38 staff weeks

Task 4. 21 staff weeks

9.0 Meetings and Travel

It is estimated that one trip to Rockville, MD to consult with NRC technical staff on Tasks 1 and 2 during each year will be required. Task 1 might require one foreign trip each year. Approval

from the NRC is required prior to each foreign trip and a trip report shall be submitted to the TPM with a copy to the TAPM.

Task 3 includes 3 person-trips to review the SNL draft NUREG, and to identify and resolve peer and public comments. Task 3 may include 3 person-trips to support a public meeting on the draft NUREG. Task 3 may also include 1 foreign trip for a foreign expert to participate in a peer review, comment and resolution process. Approval from the NRC is required prior to each foreign trip and a trip report shall be submitted to the TPM with a copy to the TAPM.

Task 4 may require 3 person trips of 3 days each for N14 meetings in Washington, DC.

NRC personnel may meet at the performing organization's facilities, as mutually agreed, to review interim progress on tasks throughout the period of performance. Meeting notes shall be taken and distributed in accordance with Section 11.0 of this SOW.

10.0 Project Status Reports

The performing organization shall submit a Monthly Letter Status Report (MLSR) by the 20th day of each month with distribution as shown below. The MLSR should contain, at a minimum, all of the required information as shown MD 11.7, Exhibit 12, "Monthly Letter Status Report Requirements."

11.0 Distribution of Deliverables

The following summarizes the required report distribution under this SOW. The NMSS TPM shall provide the performing organization with current NRC mailing addresses for this distribution.

TASKS 1-4

Distribution	Monthly Letter Status Reports	Meetings Workshops & Trip Reports	Draft Formal Tech. Reports	Final Formal Tech. Reports
NMSS TPM	1	1	1	1
NMSS TAPM	1	1	5	1*
SFST Pgm Coordinator	1			
Div. of Freedom of Info. and Pub. Services (FIPS)	0	0	0	1

* Camera-ready and electronic media

12.0 Technical/Project Direction

Technical Assistance Project Manager (TAPM): Penny Kinney
Technical Project Manager (TPM): John Cook

The NMSS TAPM is the focal point for all contract-related activities. All work assignments and program funding actions are initiated by the NMSS TAPM. All proposed work scope or schedule changes must be processed through the NMSS TAPM.

The NMSS TPM is responsible for providing technical guidance to the performing organization regarding staff interpretations of the technical aspects of regulatory requirements along with copies of relevant documents (e.g. Regulatory Guides) when requested by the performing organization. All work products must be reviewed and approved by the NMSS TPM before they are submitted as final documents. All technical direction given to the performing organization must be consistent with the work scope and schedule. The NMSS TPM is not authorized to unilaterally make changes to the approved work scope or schedule or give the performing organization any direction that would increase costs over approved levels.

Directions for changes in cost or period of performance will be provided by the DOE Operations Office after receipt of an approved Standard Order for DOE Work (SOEW) (NRC Form 173) from the Office of Nuclear Material Safety and Safeguards. If the performing organization receives guidance which is believed to be invalid under the criteria cited above, the performing organization shall immediately notify the NMSS TAPM. If the NMSS TAPM and the performing organization are unable to resolve the question within five days, the performing organization shall notify the DOE Operations Office.

13.0 Quality Assurance

13.1 - For all draft and final reports delivered under this agreement, the performing organization shall assure that an independent review and verification of all numerical computations and mathematical equations and derivations are verified by qualified personnel other than the original author(s) of the reports. If the performing organization proposes to verify/check less than 100 percent of all computations and mathematical equations and derivations in the report(s) (such as might be the case when there are a large number of routine, repetitive calculations), the performing organization must first obtain written approval from the NMSS TPM. Computer generated calculations will not require verification where the computer program has already been verified. The NMSS TPM has the option of auditing all documentation including project correspondence, drafts, calculations and unrefined data.

13.2 - In addition, all reports, including those which do not contain numerical analyses, must be reviewed by the performing organization's management and approved with two signatures, one of which is for the performing organization's management at a level above the program manager.

13.3 - When revisions for the reports are issued, a section must be included in the revised report to document dates of, reasons for, and the scope of all changes made since the issuance of the first performing organization's approved report.

13.4 - NRC has the option of appointing a Peer Group to review the draft report and make changes to the final report. The performing organization may recommend candidates for the Peer Group for approval by the NMSS TPM. On the occasion of dissent in the content of the

final report, the dissenting party will have the option of stating its viewpoints and findings in a section of the report. Alternative QA plans should be submitted for NRC review and approval.

14.0 Conflict of Interest

DOE recognizes that Section 170A of the Atomic Energy Act of 1954, as amended, requires that NRC be provided with disclosures on potential conflicts when NRC obtains technical, consulting, research and other support services. DOE further recognizes that the assignment of NRC work to DOE laboratories must satisfy NRC's conflicts standards. Accordingly, when NRC enters into an agreement with a DOE laboratory to perform work for NRC, and during the life of the agreement, the laboratory shall review its current work, planned work and where appropriate past work for DOE and others (meaning, organizations, in the same/similar technical area as the NRC project scope of work, e.g., (included but not limited to), NRC licensees, vendors, industry groups or research institutes that represent or are substantially comprised of nuclear utilities) to determine whether such work is in the same or similar area as the proposed NRC project. Should that review reveal current or planned work for DOE or others in the same or similar technical area as the proposed NRC work, the laboratory shall provide the name of the organization, dollar value, and period of performance of the work identified as well as descriptions of such potentially conflicting present/planned/past work to NRC. NRC shall then determine whether a conflict would result and, if one does, determine, after consultation with the laboratory and DOE, the appropriate action NRC or DOE should take to avoid the conflict or when appropriate under NRC procedures, waive the conflict.

15.0 Disposal of Property

Management of property purchased under this Interagency Agreement will follow the procedures as stated in Part VIII of Management Directive (MD) 11.7.

16.0 DOE-Acquired Material

In accordance with MD 11.7, Part IX, Section B, the laboratory proposal must include a description of the property required for project performance that has an estimated acquisition cost of $500 or more. The proposal must also identify the potential development of NRC-funded software during the project. NRC-funded software is software specifically developed for NRC by the laboratory and is generally the deliverable for the project. After the NRC reviews the list of property and NRC-funded software included in the laboratory proposal, any questions regarding the acquisition of property or the development of NRC funded software will be addressed with the laboratory during negotiations. After negotiating project terms and conditions, NRC shall issue NRC Form 173, "Standard Order for DOE Work" authorizing the work and approving acquisition of property or development of NRC funded software.

Laboratories shall submit a written request to the NRC project manager for approval to develop additional NRC-funded software or purchase additional property with an estimated acquisition cost of $500 or more after work initiation. The project manager shall approve or disapprove the acquisition or development of any additional items in writing.

DOE Laboratories shall report property, including software, with an acquisition cost of $500 or

more in the monthly letter status report in the month the property or software was acquired. DOE laboratories shall forward a copy of all monthly letter status reports to the NRC Division of Contracts, Office of Administration, in addition to regular distribution, DOE laboratories shall provide the information listed in MD 11.7, Part IX, Section B, paragraph (1), item (f) for each item reported as appropriate, in the monthly letter status report.

17.0 NRC-Furnished Material

None

NRC FORM 367
(10-93)
NRCMD 11.7

U.S. NUCLEAR REGULATORY COMMISSION

DOE SOURCE SELECTION JUSTIFICATION

1. JOB CODE: J5645

2. JOB CODE TITLE

International and Domestic Transportation Safety Regulatory Program

3. SELECTED SOURCE

Oak Ridge National Laboratory

4. BASIS FOR SELECTION *(Describe the basis for selection of source. Narrative must be compelling and supported by facts. See Handbook 11.7, Part I.)*

The Nuclear Regulatory Commission (NRC) is responsible for providing technical support and advice pertaining to the transportation of radioactive materials to the United States Department of Transportation (DOT) which acts as the representative of the United States to the International Atomic Energy Agency (IAEA) and other international groups. Since the NRC is providing more support in the international transportation safety regulation area, technical assistance is required for the NRC to satisfy transportation safety programmatic needs.

In order to meet programmatic needs, the Division of Spent Fuel Storage and Transportation (SFST) requires support from an organization with highly specialized skills in the areas of domestic and international transportation safety regulations. Oak Ridge National Laboratory (ORNL) is the only source that possesses the unique qualifications that are essential to the successful completion of this project. The principal investigator for this project must be a nationally and internationally recognized radioactive material transportation technical expert, with in-depth experience in IAEA, DOT, and NRC responsibilities, internal organizations and functions and rulemaking activities. In particular, the principal investigator must have experience in the development of current and previous IAEA, DOT and NRC transportation safety regulations and guides, and in the package design and certification process. This experience can only be demonstrated by having serves as the IAEA Transport Unit Head, or through multiple recent invitations from the IAEA to serve on technical committee and or consultant services meetings. These credentials are required to establish the credibility needed to support the NRC's proposals to revise IAEA and domestic transportation safety regulations and to conduct transportation impact assessments. Mr. Richard Rawl, Director of the Transportation Technologies Group at ORNL is the only person that possesses these unique qualifications by having served as the DOT Radioactive Materials Transport Chief, the IAEA Transport Unit Head, and a Nuclear Committee Chairman for the American National Standards Institute.

This project also requires technical analysis of the modelling and calculations used to derive the A-values for international and domestic transportation safety regulations. Dr. Keith Eckerman, of ORNL, is the recognized U.S. expert in the derivation of A-values. His professional credentials and accrued knowledge not only assures accurate technical work, but more ready acceptance of NRC proposals in this area by the international transport community.

Mr. Rawl and Dr. Eckerman are the foremost and most knowledgeable experts in transportation safety regualtions. This unique expertise of ORNL personnel and the importance of their accrued knowledge is critical to the successful completion of this project. Therefore, ORNL is the only source that can fulfilil the requirements of this project.

5. PROJECT MANAGER *(Typed name and title)*	ORGANIZATION *(Office/Division/Branch)*	SIGNATURE	DATE
John Cook	NMSS/SFST	John R. Cook	7/16/09
6. RECOMMENDED -- ASSOCIATE COMPETITION ADVOCATE *(Typed name)*		SIGNATURE	DATE
Mark J. Flynn, Director, PBPA, NMSS		Karen M. Field	7/17/09
7. APPROVAL -- OFFICE DIRECTOR OR DESIGNEE *(Typed name)*		SIGNATURE	DATE
for Catherine Haney, Deputy Director, NMSS		John A. Hall	8/5/09

NRC FORM 554A
(6-1998)
NRCMD 11.7

U. S. NUCLEAR REGULATORY COMMISSION

INDEPENDENT GOVERNMENT COST ESTIMATE (IGCE) FOR DOE LABORATORY AGREEMENTS

1. PROJECT TITLE

International and Domestic Transportation Safety Regulatory Program Support

2. PROJECT MANAGER	3. PERIOD OF PERFORMANCE	
	A. FROM	B. TO
John Cook	**08/17/2009**	**11/30/2011**

DESCRIPTION OF COST ELEMENTS

1. DIRECT LABOR *(List Labor Categories)*	ESTIMATED HOURS	RATE PER HOUR ($)	ESTIMATED COST ($)	TOTAL ESTIMATED COST ($)
Task 1. Director	**400.00**	**165.00**	**66,000.00**	
Task 2. Director	**480.00**	**165.00**	**79,200.00**	
Task 3. Director	**1,520.00**	**165.00**	**250,800.00**	
Task 4. Director	**1,280.00**	**165.00**	**211,200.00**	
		TOTAL DIRECT LABOR	**607,200.00**	**607,200.00**

2. LABOR OVERHEAD INCLUDING FRINGE BENEFITS	RATE (%)	TOTAL LABOR ($)	ESTIMATED COSTS ($)	TOTAL ESTIMATED COST ($)
		607,200.00		

3. MATERIALS/SERVICES (Excluding Information Technology (IT))	ESTIMATED COSTS ($)	TOTAL ESTIMATED COST ($)
TOTAL MATERIALS/SERVICES		

4. INFORMATION TECHNOLOGY SUPPORT		
TOTAL IT SUPPORT		

5. TRAVEL	ESTIMATED COSTS ($)	TOTAL ESTIMATED COST ($)
Foreign and domestic travel	**32,000.00**	**32,000.00**

6. SUBCONTRACTOR(S)/CONSULTANT(S)	ESTIMATED COSTS ($)	TOTAL ESTIMATED COST ($)
TOTAL SUBCONTRACTOR(S)/CONSULTANT(S)		

7. OTHER DIRECT COSTS	
8. TOTAL DIRECT COST AND OVERHEAD	**639,200.00**
9. GENERAL AND ADMINISTRATIVE EXPENSE (RATE: **20.0** % OF LINE 8)	**127,840.00**
10. TOTAL ESTIMATED COST	**767,040.00**
11. DOE ADDED FACTOR (RATE: **3.0** % OF LINE 10)	**23,011.20**
12. TOTAL ESTIMATED COST INCLUDING ADDED FACTOR	**790,051.20**

TYPED NAME AND TITLE	SIGNATURE
John R. Cook, Senior Transportation Safety Scientist	John R. Cook
OFFICE/DIVISION/BRANCH	DATE
NMSS/SFST/RIO	**05/01/2009**

NRC FORM 367
(10-93)
NRCMD 11.7

U.S. NUCLEAR REGULATORY COMMISSION

DOE SOURCE SELECTION JUSTIFICATION

1. JOB CODE

J5645

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5. PROJECT MANAGER *(Typed name and title)*	ORGANIZATION *(Office/Division/Branch)*	SIGNATURE	DATE
John Cook	NMSS/SFST	John R. Cook	7/16/09
6. RECOMMENDED -- ASSOCIATE COMPETITION ADVOCATE *(Typed name)*		SIGNATURE	DATE
Mark J. Flynn, Director, PBPA, NMSS		Lauren M. Field	7/17/09
7. APPROVAL -- OFFICE DIRECTOR OR DESIGNEE *(Typed name)*		SIGNATURE	DATE
for Catherine Haney, Deputy Director, NMSS		John C. Hoyle	8/5/09

ROUTING AND TRANSMITTAL SLIP

Date: Ju1y 09, 2009

NAME	INITIALS	DATE
PKinney	PK	7/10
JCook	[signature]	7/16
EHeumann	EH	7/14
KStout	KMS	7/16
KFitch	kmf	7/17
MJFlynn	kmf	7/17
CHaney		8/5
MJFlynn	kmf	7/17

MEMORANDUM/LETTER TO: DOE

FROM: Mark J. Flynn

SUBJECT: J5645

****

REMARKS:

CHECKLIST:

1. Are there sufficient funds available to provide for this action? N/A - request for proposal.
   APPROVAL SIGNATURE: Kathleen Stout
   Kathleen Stout, PBPA\NMSS

2. Does this action result in the project's **total** estimated cost exceeding $1 million or more for which Chairman review is required?
   CHAIRMAN REVIEW MEMO ATTACHED ___ REVIEW NOT REQUIRED x

3. Does this action result in the project's **total** estimated cost exceeding $3 million or more for which Chairman approval is required?
   CHAIRMAN APPROVAL MEMO ATTACHED ___ REVIEW NOT REQUIRED x

4. Is there any concern for potential Conflict of Interest issues regarding this action?
   Yes ___ (If yes, please provide detail in remarks section below) No ___
   TPM SIGNATURE N/A
   Yes ___ (If yes, please provide detail in remarks section below) No ___
   TAPM SIGNATURE N/A

****

REMARKS: Funds are projected to start being used in August. All but $10K of the estimated $170K will be spent by the end of Jan.

K.

****

ORIGINATOR: P. Kinney PHONE: (301) 492-3248

ROUTING AND TRANSMITTAL SLIP

Date: Ju1y 09, 2009

NAME	INITIALS	DATE
PKinney	PK	7/10
JCook	[illegible]	7/16
EHeumann	[illegible]	
KStout		
KFitch		
MJFlynn		
CHaney		
MJFlynn		

Deputy Director's approval required for NRC Form 367- DOE Source Selection Justification.

SFST has made the changes to the SOW as requested by Cathy.

Penny

MEMORANDUM

FROM: Deputy

SUBJECT: NRC F

********** Justific.

REMARKS:

CHECKLIST: SFST has made the changes to the SOW as requested by Cathy. rapriseel

1. Are there APPROV

2. Does this which Ch CHAIRM

3. Does this action re which Chairman a CHAIRMAN APPF

4. Is there Yes __ TPM SI Yes __ TAPM S

Penny

- You had called about this item
- A couple of changes have been made to Task 4 Subtask (contamination)
- Please resubmit into concurrence Thanks John

****

REMARKS: Fe

$10K

- A couple of changes have been made to Task 4 Subtask (contamination)
- Please resubmit into concurrence Thanks John

Jan. 6

****

ORIGINATOR: I.

Cathy & Mark