AUG 2 6 2015

INTERAGENCY AGREEMENT

1. IAA NO	PAGE	OF
NRCHQ6013D0001-T003/M0008 V6433 CAC	1	2

2. ORDER NO	3. REQUISITION NO.	4. SOLICITATION NO.
	RES-15-0459	

5. EFFECTIVE DATE	6. AWARD DATE	7. PERIOD OF PERFORMANCE
08/19/2015	08/19/2015	08/26/2013 TO 03/31/2016

8. SERVICING AGENCY
SANDIA NATIONAL LABORATORY SNL - DEPT 6034 MS - 0736
ALC: U.S. DEPARTMENT OF ENERGY
DUNS: +4:
DOENNSASFO
ATTN: WFO CONTRACTING OFFICER
PO BOX 5400
ALBUQUERQUE NM 87185-5400
POC: Mary Cocco
TELEPHONE NO: 505-844-8008

9. DELIVER TO
MICHAEL SALAY
US NUCLEAR REGULATORY COMMISSION
TWO WHITE FLINT NORTH BUILDING
11545 ROCKVILLE PIKE
MAIL STOP T-10B58
ROCKVILLE MD 20852

10. REQUESTING AGENCY
ACQUISITION MANAGEMENT DIVISION
ALC: 31000001
DUNS: 040535809 +4:
US NUCLEAR REGULATORY COMMISSION
TWO WHITE FLINT NORTH
11545 ROCKVILLE PIKE
MAIL STOP T-5E3
ROCKVILLE MD 20852-2738
POC: Carolyn A. Cooper
TELEPHONE NO: 301-415-6734

11. INVOICE OFFICE
US NUCLEAR REGULATORY COMMISSION
ONE WHITE FLINT NORTH
11555 ROCKVILLE PIKE
MAILSTOP 03-E17A
ROCKVILLE MD 20852-2738

12. ISSUING OFFICE
US NRC - HQ
ACQUISITION MANAGEMENT DIVISION
MAIL STOP TWFN-5E03
WASHINGTON DC 20555-0001

13. LEGISLATIVE AUTHORITY
Energy Reorganization Act of 1974

14. PROJECT ID
V6433

15. PROJECT TITLE
SOURCE TERM TECHNICAL ISSUES

16. ACCOUNTING DATA
2015-X0200-FEEBASED-60-60D003-11-6-213-1045-253D

17. ITEM NO.	18. SUPPLIES/SERVICES	19. QUANTITY	20. UNIT	21. UNIT PRICE	22. AMOUNT
	NRCHQ6013D0001 TASK ORDER 3 Master IAA: NRCHQ6013D0001 The purpose of this modification is to incorporate a within scope change to the statement of work as reflected in Attachment 1, thereby increasing the authorized ceiling amount of the agreement by $206,269.00, from $936,050.00 to $1,142,339.00; increasing the total obligated amount in the agreement by $200,000.00, from $936,050.00 to $1,136,050.00; and extending the period of performance from December 31, 2015 through March 31, 2016. Continued ...				

450140374 (1720405) 3Z
SNL $194,174.76
58 $ 5,825.24
V6433 (1036098)

2015.08.25
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23. PAYMENT PROVISIONS	24. TOTAL AMOUNT
	$200,000.00

25a. SIGNATURE OF GOVERNMENT REPRESENTATIVE (SERVICING)	26a. SIGNATURE OF GOVERNMENT REPRESENTATIVE (REQUESTING)
25b. NAME AND TITLE: Lindsey Van Ness, Contracting Officer	25c. DATE: 8/26/2015
26b. CONTRACTING OFFICER: CAROLYN A. COOPER	26c. DATE: 8/19/2015

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE AUG 3 1 2015

ADM002

Accordingly, the agreement is hereby modified:

TOTAL AMOUNT OF THIS ACTION: $206,289.00
TOTAL AUTHORIZED CEILING AMOUNT: $1,142,339.00 (changed)
TOTAL AMOUNT OF OBLIGATIONS: $1,136,050.00 (changed)

The following document is incorporated into this agreement: Attachment 1, Statement of Work.

ALC: 31000001 DUNS: 040535809
TAS: 31X0200.320

All other terms and conditions of the subject agreement remain unchanged.

STATEMENT OF WORK

PROJECT TITLE: Source Term Technical Issues

JOB CODE: V6433
LABORATORY: Sandia National Laboratory
SITE: Albuquerque
STATE: New Mexico

NRC CONTRACTING OFFICER'S REPRESENTATIVE: Michael Salay
(301) 251-7543

SNL PRINCIPAL INVESTIGATOR: Scott J. Weber

B&R NUMBER: 2013-60-11-6-174

PROJECT DURATION: July 1, 2013 through March 31, 2016

ESTIMATED LEVEL OF EFFORT: 4,185 staff-hours (breakdown as follows):
Task 1: 600 staff-hours
Task 2: 200 staff-hours
Task 3: 1,040 staff-hours
Task 4: 80 staff-hours
Task 5: 320 staff-hours
Task 6: 1945 staff-hours

1. BACKGROUND

Research studies of severe accidents assess the detailed behavior of reactor and containment systems, including the means by which these accidents may be prevented or mitigated. Research studies address fuel damage, progression of accident scenarios, ability to maintain damaged fuel within the reactor pressure vessel and, in the event of reactor vessel failure, the ability to confine the radiation release within the containment building. Though the above describes the phases of a reactor accident, severe accident methodologies can also be applied to spent fuel storage and non-reactor facilities.

As a major aspect of its severe accident research effort, the U.S. Nuclear Regulatory Commission (NRC) participates in international source term experimental programs. These experiments serve to validate NRC's severe accident code, MELCOR, to identify phenomena for which modeling improvements would result in a better prediction of accident consequences, and to provide the data to develop and improve models for these phenomena.

As part of this effort the NRC is currently participates in PHEBUS-ISTP (International Source Term Program); Organization for Economic Cooperation and Development/ Nuclear Energy Agency (OECD/NEA) projects such as the BIP2 (Behavior of Iodine follow-on Project), Source Term Evaluation and Mitigation (STEM); European Commission SARNET2 (Severe Accident Research Network) and Fukushima related activities (e.g., OECD/NEA Benchmark Study of the

Accident at the Fukushima Daiichi nuclear power station (BSAF) project; OECD/CSNI Activities Proposals Sheets – Filtered Containment Venting, Spent Fuel Pool Accident and Hydrogen generation, Transportation and Mitigation).

The PHÉBUS–ISTP (International Source Term Project), BIP (Behavior of Iodine Project), STEM (Source Term Evaluation and Mitigation) and BIP2 projects are small scale experiments directed towards resolving severe accident issues that were identified during the analysis of the integral PHÉBUS-FP (Fission Product) experiments. The PHÉBUS-FP experiments are the most recent and well instrumented integral experiments that provide data on fission products release, transport and behavior in a simulated PWR reactor primary and containment system. The predominant issue is the behavior of iodine in containment and its contribution to dose. The BIP2 project focuses solely on the iodine issue whereas STEM project also covers the oxidizing impact on source term, in particular the potential release of ruthenium during accidents involving air in contact with fuel rods.

The PHÉBUS-ISTP and SARNET2 projects are nearing their completion. Post test analyses continue to be conducted on samples from PHÉBUS-FP experiments; in particular revaporization experiments of the fission products deposited in the model reactor coolant system.

Radioisotopes of iodine are of particular safety concern because of their high radiotoxicity. The (NRC) has sponsored research (NUREG 1465, "Accident Source Terms for Light-Water Nuclear Power Plants: Final Report") which has established that iodine will enter the reactor containment as a mixture of gaseous and particulate material. Both forms can leak from the containment and constitute a hazard to both onsite personnel and the public. The concentration of particulate forms of iodine in the containment atmosphere will decrease in time as a result of both natural processes (such as gravitational sedimentation) and the effects of engineered safety systems (such as containment sprays). Nonetheless, the concentration of gaseous iodine can evolve to a steady-state as a result of iodine partitioning back into the atmosphere from aqueous solutions (such as water found in containment sumps). Iodine in the atmosphere may be either molecular iodine (I_2) or a volatile organic iodide such as methyl iodide (CH_3I). A revised NUREG-1465 has also been completed and peer-reviewed.

Phenomenological models for individual phenomena which are the constituents of the MELCOR code are developed using separate effects experiments. The capability of the code to predict prototypic core degradation phenomena are validated against integral experiments (and actual reactor accidents).

Improving phenomenological modeling translates directly to reducing uncertainties in the risk contributions severe accident scenarios. This impacts all NRC severe-accident risk analyses.

The following sub-tasks delineated a variety of source term work that need to completed either at the request of user offices (NRR, NRO, NMSS, NSIR) or by on-going activities related to Agency response to the March 2011 Fukushima Daiichi accident in Japan.

2. OBJECTIVE

The objective of this contract is to continue to advance the state of the art in severe accident modeling through the participation in source term experimental projects worldwide, to resolve severe accident modeling issues that were identified during the analysis of the integral PHÉBUS -FP experiments, to validate advancements against integral experiments both with and without the MELCOR code, to exercise the MELCOR code to update NRC's accident source term (NUREG-1465) used in the evaluation of reactor sites, and to rapidly provide feedback on arising high-priority source-term issues as needed.

The purpose of this modification is to increase the level of effort for Task 6 of the statement of work from 865 staff-hours to 1,945 staff hours, thereby extending the period of performance of the agreement from December 31, 2015 through March 31, 2016.

3. TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

Specific disciplines needed for this proposal are: Comprehensive knowledge of severe accident source term modeling including its limitations and need for improvement. This includes, but is not limited to, chemical, material, and fission products modeling for severe accidents. Prior knowledge and experience in performing severe accident experiments and developing analytic models and codes, analytical skills to analyze integral and separate effects experiments, and performing analyses of experiments and nuclear power plants. Understanding technical details and limitations of the PHEBUS, BIP, and STEM experiments and the source term issues associated with these experiments.

Key Personnel:

The following three members of SNL's Technical Staff will be key members of the project team. Scott J. Weber will serve as the Principal Investigator.

Scott J. Weber is a Member of Technical Staff in the Severe Accident Analysis department. He has a BS and MS in Nuclear Engineering from the University of Wisconsin – Madison. In his time at Sandia, Mr. Weber has been involved in a wide variety in projects, including in the areas of level 2 and 3 PRA, reactor modeling, consequence analysis and emergency response. Most recently, Mr. Weber analyzed separate effects experiments used to validate the MELCOR code and submitted MELCOR results to an international benchmark for the Phebus experiments.

Kyle W. Ross is a Principal Member of Technical Staff in the Severe Accident Analysis Department at Sandia National Laboratories. He holds a MS in mechanical engineering. Mr. Ross has over 20 years of experience in modeling nuclear reactor systems with best-estimate thermal hydraulic, computation fluid dynamic, and severe accident computer codes. He is adept in the application of the MELCOR, RELAP5, and TRACE codes developed for the NRC. He has been on the staff at Sandia for two years. Prior to joining the Sandia, he worked for Los Alamos National Laboratory on-site at Sandia in support of severe accident analyses beginning in 2006. He was a lead MELCOR analyst on the NRC/Sandia State-of-the-Art Reactor Consequence Analyses (SOARCA) Project. He was the lead MELCOR analyst on the SOARCA Uncertainty Analysis. Prior to his involvement with Sandia, Mr. Ross was responsible for developing, interfacing, and installing real-time engineering grade software in nuclear power plant simulators. He had lead responsibility for simulator projects at the Palo Verde Nuclear

Generating Station, Comanche Peak Steam Electric Station, Cooper Nuclear Station, and the Salem Nuclear Power Plant. Mr. Ross has physically joined plant operators in exercising PWR and BWR simulators across a full spectrum of transient and accident scenarios as well as through normal startup and shutdown procedures. Kyle Ross is the PI for the Surry UA task and key personnel.

Jeffrey N. Cardoni is a Member of Technical Staff, Nuclear Engineering R&D in 6232, and he has been with Sandia National Laboratories since 2010. Currently he conducts research on severe nuclear accidents using the MELCOR code; this includes developing and analyzing MELCOR models for pressurized water reactors, boiling water reactors, and advanced small modular reactors. Jeff is experienced in using neutronics codes (MCNP and SCALE) and CFD codes (STAR-CCM+) for core design and safety analysis for a wide variety of reactor designs, including Naval and space reactors. Programming and scripting skills include Fortran, C++, Perl, Linux scripts, Visual Basic for Excel, and MATLAB.

Sandia National Laboratories (SNL) can remove or substitute any personnel from an NRC work order, including "Key Personnel," however, removals or substitutions for "Key Personnel" shall be made in accordance with NRC MD 11.7, Part XI-4.

4. SCOPE OF WORK

Task 1: Revised NUREG-1465 for high burnup and mixed-oxide fuel

The peer-review of the revised NUREG-1465 has been completed. The results from the revised NUREG-1465 will be used for nuclear power plant design basis source term analysis to comply with siting criteria (10 CFR Part 100). Recommendations from the peer-review need to be addressed to complete revising NUREG-1465. The DOE Laboratory shall address peer reviewers' recommendations. These recommendations are (1) combine gap release and in-vessel release, (2) divide the in-vessel release phase in two – an "early" and "late" in-vessel distinguishing by release rate, (3) correct some of the MELCOR PWR analyses for consistency by re-running some MELCOR analysis, (4) provide supplement background information on selection of sequences and (5) provide additional code output plots in the MELCOR PWR analysis report

Task 2: In-kind contributions (reports) that NRC is obligated to provide to SARNET2

The NRC is participating in the European Commission Severe Accident Research Network of Excellence (SARNET2) on source term research. As part of NRC in-kind contribution to SARNET2, the following reports shall be completed and provided to the NRC for NRC to provide to EC under the SARNET2 Agreement:

a. Thermochemistry of the Ru-O-H System
b. Mo-Ru phase stabilities
c. Thermal reactions of aqueous iodine
d. Aqueous chemistry of molybdate and borate
e. Iodide adsorption on debris suspended in sumps
f. Analyses of Phébus-FP Tests 2 and 3 with MELCOR

Task 3: **Iodine modeling**

3.1: The DOE Laboratory shall collect required information from literature and from on-going experiments that NRC is participating such as the OECD Behavior of Iodine Project 2 (OECD-BIP2), the OECD Source Term Evaluation and Mitigation (OECD-STEM), the Phebus – International Source Term Project (ISTP) for each of the modeling aspects:

- Document thermodynamic data base and extension to reactor coolant system conditions
- Collect data base for radiolysis of water contaminated with CO_2, nitrate, chloride, sulfate, phosphate, borate, iodine
- Gas phase radiolysis model: data base collection and model development Heterogeneous equilibria:

3.2: Using the information gathered under Task 3.1, the DOE Laboratory shall generate a stand-alone modeling and program in code to assess what parameters are important, debug, and validate coding.

3.3: The DOE Laboratory shall develop a simplified model from the detailed model developed under Task 3.2 for implementation in MELCOR. The simplified model (compatible to MELCOR coding structure) should distill the most essential elements from the detailed model.

3.4: Aqueous Homogenous Reactor (AHR) source-term support.

The DOE Laboratory shall perform preliminary assessment of radiolytic hydrogen production models for AHRs. This work is dependent on the licensee submitting the facility design information on AHR which is to produce Mo-99 medical isotopes. The analysis may involve MELCOR simulations for hydrogen behavior in the planned facility

Task 4: **Independent Spent Fuel Storage Installation (ISFSI) source term support**

The DOE Laboratory shall provide assessment (likelihood of fission products release) of aspects of the Independent Spent Fuel Storage Installation (ISFSI) source term security calculations and shall provide release estimates resulting from a specific scenario based on MELCOR calculations.

Consultation on phenomena related to fission product releases from dry casks, assessment of potential experiments, review/recommendations for potential modeling, and review of aspects of calculations used by NRC to predict fission product releases from dry casks.

Task 5: **Liquid source term from current LWRs**

Modify MELCOR modeling Adaptation of models to provide an estimate of the fission products release from reactors along with water. This is to account for what occurred at the Fukushima accident that a lot of contaminated water leaching out from the reactor building into the surroundings.

- Leaching - (Leaching data base available as cited above.)
- Corrosion - revise current thermodynamic model to calculate the corrosion potentials.

To calculate corrosion rates with the corrosion potentials will require some mass transport modeling.

Task 6: **Technical support for source term issues**

The DOE Laboratory shall provide technical support to the NRC in addressing source term issues and shall be documented in the MLSR and be identified in a technical report format. This support includes:

- Participating, reviewing, analyzing, and providing feedback (email, reports, presentations as appropriate) on material (proposals, data, reports) from source term projects (e.g., OECD-BIP2, OECD-STEM, Phebus-ISTP, NRC Cooperative Severe Accident Research Program) in which the NRC participates and provide assessments of the usefulness of data from the projects for the improvement of the MELCOR code.

- Analyzing and providing feedback on source term issues (e.g., licensing of operating reactors, new reactors, dry-casks and transportation casks, small module reactors; and Fukushima accident – cleanup efforts) that arise during the agreement period of performance
- Knowledge Management activities (transfer of severe accident knowledge and mentoring NRC staff)

- Preservation of experimental data and documentation including modeling of experimental phenomena. Locate and digitize material.

- Training – preparation of training material / consultation of NRC staff on severe accident phenomena and modeling

5. DELIVERABLES/SCHEDULES AND/OR MILESTONES

Task	Item	Date (or frequency) Estimate
1	Final Revised source term report (update for NUREG-1465) for high burnup and mixed-oxide fuel and supplements	March 2014
2	Final In-kind contributions (reports) that NRC obligated to provide to SARNET2	December 2013
3.2	Final Iodine modeling report	June 2014
3.3	Simplified iodine model for MELCOR	December 2014
3.4	Assessment of ISFSI source term	May 2015
4	Final ISFSI-related (NSIR user need) report	June 2014
5	Final Liquid source term from current LWRs	December 2014

6	Reports, e-mail response, white paper, DVDs, other digital media, etc.,	As needed

6. REPORTING REQUIREMENTS

Required deliverables are outlined in the "DELIVERABLES/SCHEDULES AND/OR MILESTONES" sections above. All letter reports shall be reviewed by a first-level supervisor prior to submittal. All deliverables shall be submitted electronically, via email, to the NRC Contracting Officer's Representative.

7. MONTHLY LETTER STATUS REPORTS

In accordance with Section 4 of the attached Standard Terms and Conditions for DOE Work, a copy of the Monthly Letter Status Report (MLSR) is to be submitted to the following mailboxes:

RESDSAMLSR.Resource@nrc.gov
ContractsPOT.Resource@nrc.gov
Michael.Salay@nrc.gov

8. MEETINGS AND TRAVEL

FY13: Domestic travel – 1 trip for 1 traveler (1-2 days total)
FY14: Domestic travel – 2 trips for 1 traveler (1-2 days total)
FY15: International travel - 1 trip for 1 traveler (3-4 days total)
Domestic travel – 2 trips for 1 traveler (1-2 days total)

9. NRC-FURNISHED MATERIAL

Data from the OECD-STEM, OECD-BIP2, Phebus-ISTP, licensee submittals on AHR

10. RESEARCH QUALITY

The quality of NRC research programs are assessed each year by the Advisory Committee on Reactor Safeguards. Within the context of their reviews of RES programs, the definition of quality research is based upon several major characteristics:

Results meet the objectives (75% of overall score)
Justification of major assumptions (12%)
Soundness of technical approach and results (52%)
Uncertainties and sensitivities addressed (11%)

Documentation of research results and methods is adequate (25% of overall score)
Clarity of presentation (16%)
Identification of major assumptions (9%)

It is the responsibility of the DOE Laboratory to ensure that these quality criteria are adequately addressed throughout the course of the research that is performed. The NRC project manager and technical monitor will review all research products with these criteria in mind.

11. NEW STANDARDS FOR CONTRACTORS WHO PREPARE NUREG-SERIES MANUSCRIPTS

The U.S. Nuclear Regulatory Commission (NRC) began to capture most of its official records electronically on January 1, 2000. The NRC will capture each final NUREG-series publication in its native application. Therefore, please submit your final manuscript that has been approved by your NRC Project Manager in both electronic and camera-ready copy.

The final manuscript shall be of archival quality and comply with the requirements of NRC Management Directive 3.7 "NUREG-Series Publications." The document shall be technically edited consistent with NUREG–1379, Rev. 2 (May 2009) "NRC Editorial Style Guide." The goals of the "NRC Editorial Style Guide" are readability and consistency for all agency documents.

All format guidance, as specified in NUREG-0650, "Preparing NUREG-Series Publications," Rev. 2 (January 1999), will remain the same with one exception. You will no longer be required to include the NUREG-series designator on the bottom of each page of the manuscript. The NRC will assign this designator when we send the camera-ready copy to the printer and will place the designator on the cover, title page, and spine. The designator for each report will no longer be assigned when the decision to prepare a publication is made. The NRC's Publishing Services Branch will inform the NRC Project Manager for the publication of the assigned designator when the final manuscript is sent to the printer.

For the electronic manuscript, the Contractor shall prepare the text in Microsoft Word, and use any of the following file types for charts, spreadsheets, and the like.

File Types to be Used for NUREG-Series Publications	
File Type	File Extension
Microsoft®Word®	.doc
Microsoft® PowerPoint®	.ppt
Microsoft®Excel	.xls
Microsoft®Access	.mdb
Portable Document Format	.pdf

This list is subject to change if new software packages come into common use at NRC or by our licensees or other stakeholders that participate in the electronic submission process. If a portion of your manuscript is from another source and you cannot obtain an acceptable electronic file type for this portion (e.g., an appendix from an old publication), the NRC can, if necessary, create a tagged image file format (file extension.tif) for that portion of your report. Note that you should continue to submit original photographs, which will be scanned, since digitized photographs do not print well.

If you choose to publish a compact disk (CD) of your publication, place on the CD copies of the manuscript in both (1) a portable document format (PDF); (2) a Microsoft Word file format, and (3) an Adobe Acrobat Reader, or, alternatively, print instructions for obtaining a free copy of Adobe Acrobat Reader on the back cover insert of the jewel box.

12. SUBCONTRACTING/CONSULTANT INFORMATION

Describe any technical support effort that is proposed to be performed by a subcontractor or consultant. Identify the level of effort, by task, of any proposed subcontractor or consultant and provide an explanation of the need for subcontracting that portion of the effort. Note that "pass through" contracting is not allowed under the requirements of the DOE/NRC Memorandum of Understanding. For the purposes of this effort, a "pass through" contract is generally defined as subcontracting 50 percent or more of the technical effort. For any subcontract or consultant effort, describe the following:

- the necessity of subcontracting,
- the tasks and subtasks the subcontractor or consultant will perform,
- the level of effort proposed for the subcontract effort,
- the status and expected time frame for selection, and
- the method of selection of the subcontractor or consultant.

13. INFORMATION TECHNOLOGY (IT) RESOURCES:

When IT resources are proposed by a DOE Laboratory that are not specifically identified in the Statement of Work, the need for and cost of those resources must be justified. Exhibit 8 of MD 11.7 can be used to help determine justification. Proposed IT resources should be those required to accomplish the work, but which are not available from within the laboratory's inventory of IT resources. Common office automation equipment and software, i.e., personal computers, word processing and spreadsheet software, and printers, should not routinely be proposed as they should normally be provided as part of the laboratory's information processing infrastructure. Whenever IT resources are proposed, justification is necessary for the NRC to be able to evaluate the requirements and to approve their acquisition.

In addition to the total cost of IT resources to be reported on the NRC Form 189, the following justification is to be included in the proposal:

1. IT Resource Requirements. List as line items each IT resource (hardware, e.g., laptop computer, engineering workstation; software - by product name; and services, e.g., computer time, database services) proposed for acquisition and estimate the cost of each item by fiscal year. Funding should be indicated for the year in which the IT resources are needed. Provide totals for all items for each fiscal year which match the costs listed on the line labeled IT RESOURCES on the NRC Form 189. Any IT acquisition shall conform to the acquisition and reporting requirements identified in NRC Management Directive 11.7, Part 9.

2. Justification. For each required IT resource with an acquisition cost of $500 or more, or group of resources, e.g., a system, provide specifications or the specific make/model, and other acquisition and reporting requirements identified in NRC Management Directive 11.7, Part 9. Briefly discuss how the IT resources will be used, including information about workload to be processed, required capacities, throughput, transfer

rates, compatibility and expandability requirements, or any other information that supports the need to acquire the specific resources being proposed.

14. CONTRACTING OFFICER'S REPRESENTATIVE (COR)

Technical direction as defined in Section 1 of the Standard Terms and Conditions will be provided by the COR, (Michael Salay), who can be reached at:

U. S. Nuclear Regulatory Commission
Mail Stop CSB 03A07M
Washington, D. C. 20555-0001
Phone: (301) 251-7543
Fax: (301) 251-7436
Email: Michael.Salay@nrc.gov

Express mail should be sent to:
U. S. Nuclear Regulatory Commission
Mail Stop: CSB 03A07M
11545 Rockville Pike
Rockville, MD 20852-2738