

ORDER FOR SUPPLIES OR SERVICES

IMPORTANT: Mail all packages and papers with contract and/or order numbers.

BPA NO.

1. DATE OF ORDER JUN 12 2009		2. CONTRACT NO. (if any) NRC-42-08-064		6. SHIP TO:	
3. ORDER NO. NRC-T016		MODIFICATION NO.		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
		4. REQUISITION/REFERENCE NO. 42-08-064T016 09806416182		b. STREET ADDRESS Attn: Richard Daniel, 301 415 6319	
5. ISSUING OFFICE (Address correspondence to): U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Jeffrey R. Mitchell, 301-492-3639 Mail Stop TWB-01-B10M Washington, DC 20555				c. CITY Washington	
				d. STATE DC	
				e. ZIP CODE 20555	
7. TO:				f. SHIP VIA	
a. NAME OF CONTRACTOR INFORMATION SYSTEMS LABORATORIES, INC ISL				8. TYPE OF ORDER	
b. COMPANY NAME ATTN: DR. JAMES F. MEYER				<input type="checkbox"/> a. PURCHASE	
c. STREET ADDRESS 11140 ROCKVILLE PIKE, SUITE 500				<input checked="" type="checkbox"/> b. DELIVERY	
d. CITY ROCKVILLE				REFERENCE YOUR _____ Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.	
e. STATE MD				Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
f. ZIP CODE 20852					
9. ACCOUNTING AND APPROPRIATION DATA See CONTINUATION Page 925-15-171-103 Q4182 252A 31x0200.925 Obligate \$94,650.00 DUNS: 107928806				10. REQUISITIONING OFFICE NRO	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT Destination	
<input type="checkbox"/> a. SMALL				<input checked="" type="checkbox"/> b. OTHER THAN SMALL	
<input type="checkbox"/> c. DISADVANTAGED				<input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED	
<input type="checkbox"/> d. WOMEN-OWNED				<input type="checkbox"/> f. EMERGING SMALL BUSINESS	
<input type="checkbox"/> e. HUBZone					
13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)	
a. INSPECTION		b. ACCEPTANCE		16. DISCOUNT TERMS	

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Issuance of Task Order 16 under Contract No. NRC-42-08-064 Title: US-APWR DC - Review of MUAP-07009, Thermal Design Topical Report Period of Performance: Day of Award to December 31, 2009 Estimated Reimbursable Cost: \$87,865.00 Fixed Fee: \$6,785.00 Total Cost Plus Fixed Fee: \$94,650.00 Funding in the amount of \$94,650.00 is provided SEE CONTINUING PAGES			See CONTINUATION Page		

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.	
21. MAIL INVOICE TO:					
a. NAME Department of Interior / NBC NRCPayments@nbc.gov					
b. STREET ADDRESS (or P.O. Box) Attn: Fiscal Services Branch - D2770 7301 W. Mansfield Avenue					
c. CITY Denver		d. STATE CO		e. ZIP CODE 80235-2230	

17(h) TOTAL (Cont. pages)
17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature) 		23. NAME (Typed) Jeffrey R. Mitchell Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER	
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In accordance with Section G.4, Task Order Procedures, of Contract No. NRC-42-08-064, this definitizes Task Order No. 16. The effort shall be performed in accordance with the attached Statement of Work.

Task Order No. 16 shall be in effect from Day of Award through December 31, 2009, with a cost ceiling of \$94,650.00. The amount of \$87,865.00 represents the estimated reimbursable costs, and the amount of \$6,785.00 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$94,650.00, of which \$87,865.00 represents the estimated reimbursable costs, and the amount of \$6,785.00 represents the fixed fee.

The issuance of this task order does not amend any terms or conditions of the subject contract.

Your contacts during the course of this task order are:

Technical Matter: Richard Daniel
Task Order Project Officer
301-415-6319

Contractual Matters: Jeffrey R. Mitchell
Contract Specialist
301-492-3639

Acceptance of Task Order No. 16 should be made by having an official, authorized to bind your organization, execute three copies of this document in the space provided and return two copies to the Contract Specialist at the address identified in Block No. 5 of the OF 347. You should retain the third copy for your records.

ACCEPTANCE:

NAME


Senior V.P.

TITLE

DATE

6/12/09

TASK ORDER STATEMENT OF WORK

JCN Q-4182	Contractor ISL	Task Order No. NRC 42-08-064 (TO 16)
Applicant Mitsubishi	Design/Site USAPWR/DC	Docket No. 5200021
Title/Description US-APWR DC – Review of MUAP-07009, Thermal Design Topical Report		
TAC No. RX0653	B&R Number 925-15-171-103	SRP or ESRP Section(s) MUAP-07009, Thermal Design Topical Report
NRC Task Order Project Officer (PO)		
Richard Daniel	301-415-6319	Richard.Daniel@nrc.gov
NRC Technical Monitor (TM)		
Jeff Schmidt	301-415-4016	Jeffrey.Schmidt2@nrc.gov

1.0 BACKGROUND

Combined Operating License (COL) Applications are submitted pursuant to Part 52 of Title 10 of the *Code of Federal Regulations* (10 CFR 52), "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants." The U.S. Nuclear Regulatory Commission (NRC) reviews COL Applications based on information furnished by electric utility companies pursuant to 10 CFR 52.79, "Contents of Applications Technical Information."

A Standard Review Plan (NUREG-0800) is prepared for the guidance of staff reviewers in the Office of New Reactors in performing safety reviews of applications to construct or operate nuclear power plants and the review of applications to approve standard designs and sites for nuclear power plants. The principal purpose of the SRP is to assure the quality and uniformity of staff safety reviews.

An Environmental Safety Review Plan (NUREG-1555) is prepared for the guidance of staff reviewers in performing environmental reviews of applications related to nuclear power plants. The ESRPs are companions to regulatory guides that address siting and environmental issues. As with NUREG-0800 the purpose of the ESRP is to assure the quality and uniformity of environmental reviews.

The staff publishes the results of these reviews in a Safety Evaluation Report (SER).

2.0 OBJECTIVE

The objective of this task order is to obtain technical expertise from the contractor to assist the NRC staff in determining whether or not the subject DC application meets appropriate regulatory requirements. Specifically, technical assistance is required to support review of US-APWR Thermal Design Topical Report, MUAP-07009.

3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES

Tasks/Standards	Scheduled Completion	Deliverables
<p>1. REQUIREMENT: Become familiar with (ESRP or SRP) the Thermal Design Topical Report (MUAP-07009) and <i>(other references if applicable)</i></p> <p>STANDARD: Written confirmation that familiarization is complete</p>	<p>One week after authorization of work</p>	<p>Documentation that assigned personnel have reviewed SRP, and applicable sections of RG 1.206 and TMI action items</p>
<p>2. REQUIREMENT: Participate in an orientation/kick-off meeting with the NRC staff to discuss the scope of the work, expectations and contract management</p> <p>STANDARD: Attendance by individuals designated by NRC.</p>	<p>2 weeks after authorization of work</p>	<p>N/A</p>
<p>3. REQUIREMENT: Review the Thermal Design Topical Report, MUAP-07009 to determine if 1) the adequacy of the VIPRE01 code version in predicting APWR fuel thermal-hydraulic performance, 2) the validity of changes made to VIPRE01 by the for the APWR fuel design and 3) provide consultation to the NCR reviewer. Determine if the methods and approach proposed by the applicant meet the review guidance. Identify issues and the need for any additional or clarifying information (requests for additional information, RAIs). Identify those aspects of the application that need additional or clarifying information (RAIs). Prepare draft RAIs and consult as needed.</p> <p>STANDARD: Draft RAIs</p>	<p>4 weeks after authorization of work</p>	<p>RAIs, if applicable</p>
<p>a. Completion of the Task.</p>	<p>4 weeks after authorization of work</p>	<p>Final RAIs</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>4. REQUIREMENT: Review response to the RAIs to determine if they adequately resolve the outstanding issues. Identify any other open items. Incorporate the review results in the evaluation report completed under Task 3.</p> <p>STANDARD: Written responses/review comments to applicant RAI responses</p>	<p>4 weeks after receipt of the responses.</p>	<p>Provide TM written responses to applicant's RAI responses</p>
<p>5. REQUIREMENT: <i>(If applicable)</i> Prepare for and travel to the applicant's office and participate in an NRC review team to:</p> <ul style="list-style-type: none"> a. Audit supporting analysis or references b. Evaluate and discuss the applicant's responses to the unresolved issues identified in Task 4 to determine if the outstanding issues are adequately resolved. c. Prepare a trip report (as an input to NRC Audit Report) to summarize the information reviewed, results of the audit, and meeting discussions. <p>STANDARD: Complete evaluation as defined in Task. Submit Trip Report within weeks of site review.</p>	<p>1 weeks after the trip</p>	<p>Trip Report</p>
<p>6. REQUIREMENT: Review the applicant's response to the open items identified as a result of the design audit (Tasks 4 & 5). Identify any unresolved issues and provide guidance to NRC reviewer. Review NRC prepared SER w/open items and provide comments if necessary. Provide any necessary consultation.</p> <p>STANDARD: Complete Technical Evaluation Report that follows the NRC provided template without deviation.</p>	<p>5 weeks after receipt of responses</p>	<p>Review NRC prepared Safety Evaluation Report w/open items and provide written comments if necessary</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>7. REQUIREMENT: As needed and requested by the staff, provide technical support to the staff during related ACRS meetings and hearing proceedings.</p> <p>STANDARD: Ensure presentation materials are reviewed and approved by NRC staff.</p>	TBD	Support NRC staff at ACRS meeting(s)

* These Work Schedules are subject to change by the NRC Contracting Officer (CO) to support the needs of the NRC Licensing Program Plan.

The Technical Monitor may issue technical instruction from time to time throughout the duration of this task order. Technical instructions must be within the general statement of work delineated in the task order and shall not constitute new assignments of work or changes of such a nature as to justify an adjustment in cost or period of performance. The contractor shall refer to Section G.1 of the base contract for further information and guidance on any technical directions issued under this task order.

Any modifications to the scope of work, cost or period of performance of this task order must be issued by the CO and will be coordinated with the NRO Project Officer.

4.0 TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

As specified in the base contract, the contractor shall provide individuals who have the required educational background and work experience to meet the objectives of the work specified in this task order. Specific qualifications for this effort include:

Contractor should be knowledgeable in subchannel thermal-hydraulics codes and analysis, preferably with VIPRE code experience.

The contractor shall provide a contractor project manager (PM) to oversee the effort and ensure the timely submittal of quality deliverables so that all information is accurate and complete as defined in the base contract.

The NRC will rely on representations made by the contractor concerning the qualifications of the personnel assigned to this task order, including assurance that all information contained in the technical and cost proposals, including resumes, is accurate and truthful. The resume for each professional proposed to work under this task order (contractor, subcontractor, or consultant) shall describe the individual's experience in applying his or her area of engineering specialization to work in the proposed area. The use of particular personnel on this contract is subject to the NRC Technical Monitor's (TM's) approval. This includes any proposed changes to key personnel during the life of the task order.

5.0 REPORTING REQUIREMENTS

Task Order Progress Report

The contractor shall provide a bi-weekly progress report summarizing accomplishments, expenditures, contractor staff hours expended, percent completed for each task under this task order, and any problems encountered by the contractor. The report shall be sent via e-mail to the NRC TM, Task Order Project Officer (PO) and CO.

Please refer to Section F of the basic contract award document for contract reporting requirements.

Technical reporting requirements

Unless otherwise specified above, the contractor shall provide all deliverables as draft products. The NRC TM will review all draft deliverables (and coordinate any internal NRC staff review, if needed) and provide comments back to the contractor. The contractor shall revise the draft deliverable based on the comments provided by the TM, and then deliver the final version of the deliverable. When mutually agreed upon between the contractor and the TM, the contractor may submit preliminary or partial drafts to help gauge the contractor's understanding of the particular work requirement.

The contractor shall provide the following deliverables in hard copy and electronic formats. The electronic format shall be provided in MS Word or other word processing software approved by the TM. For each deliverable, the contractor shall provide one hard copy and electronic copy to both the PM and the TM. The schedule for deliverables shall be contained in the approved project plan for the task order effort.

In all correspondence, include identifying information: JCN Q-4182; Technical Assignment Control (TAC) RX0653 Task Order 16; the licensee: Mitsubishi; and, the site: Design Certification.

1. At the completion of Task 3, submit a list of "Requests for Additional Information: (RAIs).
2. At the completion of Task 4, submit a written report describing the resolution of the RAIs. Include a separate list of the remaining open items and the basis for such determination.
3. At the completion of Task 5, submit a trip report, as an input to NRC audit report, that contains a summary of documents audited, a summary of meeting discussion conducted with the applicant, list of outstanding issues, significance of these issues, and the basis for the conclusion. Incorporate the findings in the report developed under Task 3.
4. At the completion of Task 6, provide written comments on NRC prepared SER.

6.0 MEETINGS AND TRAVEL

One, 2-person, 1-day working meeting to kickoff project and contractor orientation.*

(If required) One, 2-person, 2-day trips to the applicant's facility (Tasks 5).

One 2-person, 2-day working meetings at NRC headquarters to review deliverables*

One, 2-person, 2-day meetings, if needed, for hearing or ACRS meeting.

*At the discretion of the NRC TM, meeting may be conducted via telephone or video conference.

7.0 NRC FURNISHED MATERIAL

The following NRC furnished materials will be provided to the contractor together with SOW:

- a. CD-ROM containing the Final Safety Evaluation Report of the DCD.
- b. Copy of MUAP-07009, Thermal Design Topical Report.

8.0 PERIOD OF PERFORMANCE

The period of performance is from Day of Award through December 31, 2009.

9.0. OTHER APPLICABLE INFORMATION

- a. License Fee Recovery

All work under this task order is fee recoverable and must be charged to the appropriate TAC number(s).

- b. Assumptions and Understandings:

The level of effort for Task 3 is based on the assumption that the contractor is familiar with the review procedures for Thermal-hydraulic Topical Reports.

The level of effort for Task 4 is based on the assumption that there will be ~25 RAIs and it will take, on the average, 2.5 hours to review and address each response.

The level of effort for Task 5 is based on two, two-person, 2-day trips (including travel time) plus four days to prepare for the trips and to write the trip reports.

The level of effort for Task 6 is based on the need to resolve 15 open items and it will take, on the average, 4 hours to review and resolve each open item, and prepare an SER.

The level of effort in Task 7 is based on requiring one trip to the site and one trip to NRC headquarters.

It is assumed that the contractor has access to the NRC furnished material available on the Internet.

It is understood that the scope of the review consists of conference calls with the NRC staff, and with the NRC staff and the applicant, to discuss open items in an attempt to obtain additional information or reach resolution.

The primary deliverable, or output of this regulatory review, shall be the any RAIs as necessary, consultation with NRC staff and review of the staff's Safety Evaluation Report (SER).