

ORDER FOR SUPPLIES OR SERVICES

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

BPA NO.

1. DATE OF ORDER JAN 24 2008		2. CONTRACT NO. (if any) NRC-42-07-036		6. SHIP TO:	
3. ORDER NO. 0016		4. REQUISITION/REFERENCE NO. NRC-42-07-036 (16) FFS: NRO08027		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Kala Shankar 301-415-6310 Mail Stop T-7-I-2 Washington, DC 20555				b. STREET ADDRESS Attn: Jayne Halverson 415-6001 Mail Stop: T6-C34	
7. TO:		c. CITY Washington		d. STATE DC	e. ZIP CODE 20555
a. NAME OF CONTRACTOR INFORMATION SYSTEMS LABORATORIES, INC ISL				f. SHIP VIA	
b. COMPANY NAME ATTN: DR. JAMES F. MEYER				8. TYPE OF ORDER	
c. STREET ADDRESS 11140 ROCKVILLE PIKE, SUITE 500				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY 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.	
d. CITY ROCKVILLE		e. STATE MD	f. ZIP CODE 20852		
9. ACCOUNTING AND APPROPRIATION DATA B&R:825-15-171-103; JC:Q4160; BOC 252A; 31X0200 Obligate: \$170,000 Contractor 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"/> d. WOMEN-OWNED		<input type="checkbox"/> e. HUBZone		<input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED	
<input type="checkbox"/> f. EMERGING SMALLBUSINESS					
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 No. 16 under Contract No. NRC-42-07-036 Title: "AREVA EPR Design Certificate Documentation Chapter 15 Review Support Activity" Period of Performance: 01/24/08 - 0/23/09 Estimated Reimbursable Cost: \$429,960.00 Fixed Fee:\$31,086.00 Total Cost Plus Fixed Fee:\$461,046.00 SEE CONTINUATION PAGES Funding in the amount of \$170,000 is being provided See Continuation Pages					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.	
21. MAIL INVOICE TO:					
a. NAME U.S. Nuclear Regulatory Commission Payment Team, Mail Stop T-7-I-2					
b. STREET ADDRESS (or P.O. Box) Attn: (NRC-42-07-036 Task Order No. 16)					
c. CITY Washington		d. STATE DC	e. ZIP CODE 20555		

17(h)
TOTAL
(Cont. pages)

17(i).
GRAND TOTAL

22. UNITED STATES OF AMERICA
BY (Signature)

Kala Shankar

23. NAME (Typed)
Kala Shankar
Contracting Officer

TITLE: CONTRACTING/ORDERING OFFICER

In accordance with Section G.4, Task Order Procedures, of Contract No. NRC-42-07-036, 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 January 24, 2008 through January 23, 2009, with a cost ceiling of \$461,046. The amount of \$429,960 represents the estimated reimbursable costs, and the amount of \$31,086 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$170,000, of which \$159,624 represents the estimated reimbursable costs, and the amount of \$10,376 represents the fixed fee.

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

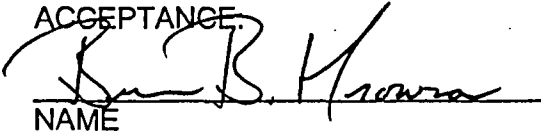
Your contacts during the course of this task order are:

Technical Matter: Jayne Halverson
Project Officer
301-415-6001

Contractual Matters: Kala Shankar
Contract Specialist
301-415-6310

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

V.P.
TITLE

1/24/08
DATE

TASK ORDER STATEMENT OF WORK

JCN Q4159	Contractor TBD	Task Order No. TBD
Applicant AREVA	Design/Site EPR	Docket No. Project No. 733
Title/Description AREVA EPR Design Certificate Document Chapter 15 Review Support Activity		
TAC No.	B&R Number 825-15-171-103	SRP Section(s) or ESRP Chapter 15
NRC Technical Assistance Project Manager (TAPM) Elinor Cunningham 301-415-6580 EMC3@nrc.gov		
NRC Technical Monitor (TM) Shanlai Lu 301-415-2869 SXL2@nrc.gov		

*** REQUEST FOR PROPOSAL ***

A proposal is requested to perform the work described in this Statement of Work. The due date for your proposal is 2 p.m. (Washington, DC, local time), **January 18, 2008**, and shall consist of two parts: a technical approach and a cost estimate.

As a minimum, the technical approach shall substantiate your understanding of the requirements of the work, note any anticipated problem areas or deviations from the Statement of Work, identify key personnel who will perform the work, include resumes of those personnel not already in the contract, and address any potential conflict of interest issues. The following certification must also be submitted with your proposal: "I represent to the best of my knowledge and belief that the award of Task Order No. _____ under Contract No. NRC-42-07-xxx to _____ does // or does not // involve situations or relationships of the type set forth in NRCAR 2009.570-3."

The contractor shall provide a staffing plan that specifically reflects services to be provided. Examples of the staffing plan are provided in Section J, Attachment 2 of the basic contract award document.

You are also required to identify any current/former NRC employees who have or will be involved, directly or indirectly, in developing the proposal, or in negotiating on behalf of your firm or in managing, administering or performing any purchase orders, contracts, consultant agreement or subcontract resulting from this proposal (list name, title and date individual left NRC and provide brief description of individual's role under this proposal.) If there are no current/former NRC employees involved, a negative statement is required.

The second part of your proposal shall be your cost estimate. Submit your cost estimate in accordance with the Federal Acquisition Regulation (FAR). Your proposal format along with supporting information in your own format (information such as proposed labor hours and labor rates, cost of equipment and materials, etc.) which supports your estimated costs must be submitted.

CAUTION - It should be noted that this request for proposal does not commit the Government to pay any costs incurred in the submission of proposals or make necessary studies or designs for the preparation thereof, nor to procure or contract for the services in the enclosed Statement of Work. It is also brought to your attention that the Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds in connection with this proposed task order.

Your response to the subject RFP should be sent electronically to KXS4@NRC.GOV with a copy to EMC3@NRC.GOV and SXL2@NRC.GOV.

The proposal shall be signed by an official authorized to bind the company, and it shall contain a statement indicating a proposal acceptance period of not less than 30 days.

1.0 BACKGROUND

AREVA (NP) has notified U.S. Nuclear Regulatory Commission (NRC) that they intend to submit the design certificate document (DCD) for its application of Economical Pressurized Reactor (EPR) in December, 2007. NRC staff plans to initiate the acceptance review of DCD and conduct design certificate review after the acceptance review indicates the adequacy of the design.

A Standard Review Plan (SRP) (NUREG-0800) is prepared for the guidance of staff reviewers in the Office of New Reactors in performing safety reviews of new reactor design certification applications. The principal purpose of the SRP is to assure the quality and uniformity of staff safety reviews. As part of the full scope of EPR DCD review, staffs of Reactor Systems, Nuclear Performance & Code Review Branch (SRSB) will conduct review of important parts of DCD corresponding to SRP Chapter 15 and other reactor system related design features in SRP chapter 4, 5, 6, 9 and 14 and Reg 1.206 Chapter 15.

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 staff in determining the adequacy of the AREVA EPR design certificate application relating to SRP Chapter 15 and other reactor system design features.

3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES

Tasks/Standards	Scheduled Completion	Deliverables
<p>1. Become familiar with SRP Chapter 15. and all the TMI action items, Generic Safety Issues (GSI), Unresolved Safety Issues (USI), Generic Letter (GL) and Bulletins (BL) documented in Chapter 15, Regulatory Guide 1.206.</p> <p>STANDARD: Written confirmation that familiarization is complete</p>	<p>One week after authorization of work.</p>	<p>A memo documenting the completion of reading the SRP Chapter 15 and TMI action items, GSI, USI, GL and BLs.</p>
<p>2. Participate in an orientation/kick-off meeting with the NRC staff and AREVA to become familiar with the Chapter 15 of DCD submittals and relevant material related to GSI, USI, GL, BL and TMI action items.</p> <p>STANDARD: Attendance by individuals designated by NRC technical monitor.</p>	<p>Two weeks after authorization of work.</p>	<p>N/A</p>
<p>3. Review the DCD application Chapter 15 to determine the completeness and overall technical adequacy of the DCD submittals. Communicate immediately with staff regarding any issues related to the completeness and technical adequacy of DCD.</p>	<p>Five weeks after authorization of work or directed by the technical monitor.</p>	<p>A memo documenting the results of acceptance review.</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>4. Review Chapter 15.0-15.4 and all GSI related action items (GSI, USI, GLs, BLs and TMI action items).</p> <p>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). Evaluate the applicant analysis using NRC's confirmatory analysis results of TRACE EPR model. Thoroughly review AREVA SRELAP-5 EPR model and its development process. Based on the review, prepare a Technical Evaluation Report (TER).</p> <p>STANDARD: Complete Technical Evaluation Report that follows the NRC provided template without deviation. However, if deviation is needed, prior approval of the template from NRC technical monitor is needed.</p>		
<p>a. Prepare and participate the NRC on-site review activity to interact with AREVA technical staff and identify additional supporting materials needed to support the official RAI and TER development.</p>	<p>Two weeks after the initiation of official DCD review or notified by the NRC technical monitor.</p>	<p>Trip report with the list of additional technical reports and draft RAIs, which identify the potential technical issues.</p>
<p>b. Review the submitted DCD material and supporting technical reports and develop 1st round of RAIs and participate meetings with staff and AREVA personals.</p> <p>Identify the most limiting accident scenarios for LOCA, AOO and RIA events. Recommend the confirmatory analysis cases to the staff.</p>	<p>Starting from the official initiation of DCD review for ten working weeks.</p>	<ol style="list-style-type: none"> 1. Provide weekly status reports. 2. Deliver draft RAIs identifying potential technical issues. 3. Deliver 1st draft TER following NRC's SER template. 4. Provide a summary report documenting the identified confirmatory cases.

Tasks/Standards	Scheduled Completion	Deliverables
<p>c. Evaluate and discuss the applicant's responses to the 1st round of RAIs identified in Task 4.b to determine if the outstanding issues are adequately resolved.</p>	<p>Eleventh to sixteenth week into the DCD review.</p>	<p>1. Provide weekly status reports. 2. Incorporate the resolved RAIs into the draft TER.</p>
<p>d. Review the submitted DCD material and supporting technical reports and develop 2nd round of RAIs based on the 1st round of RAI responses and participate meetings with staff and AREVA personals.</p>	<p>Seventeenth to eighteenth week into the DCD review.</p>	<p>1. Deliver 2nd draft RAIs identifying potential technical issues. 2. Provide weekly status report.</p>
<p>e. Review ARVA's technical reports about reflux condensation during SBLOCA and Boron precipitation during LBLOCA. Identify potential technical issues and RAIs.</p>	<p>Nineteenth to twenty first week into the DCD review.</p>	<p>1. Deliver a summary review report. 2. Provide weekly status report.</p>
<p>f. Evaluate and discuss the applicant's responses to the 2nd round of RAIs identified in Task 4.d to determine if the outstanding issues are adequately resolved. Identify open items.</p>	<p>Twenty first to twenty fifth week into the DCD review.</p>	<p>1. Deliver a draft TER with open items identified. 2. Provide weekly status report.</p>
<p>g. Develop ACRS presentation slides and material for staff to review and modify the TER based on staff's comments. Support staff's ACRS presentations.</p>	<p>Twenty fifth to twenty eighth week into the DCD review.</p>	<p>1. ACRS presentation slides. 2. ACRS meeting trip report. 2. Provide weekly status report.</p>
<p>h. Finalize TER with open items based on staff comments and ACRS comments.</p>	<p>Twenty ninth to thirty second week into the DCD review.</p>	<p>1. Final TER with possible open items; 2. Provide weekly status report.</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>5. Use the EPR TRACE and RELAP-5 models developed by NRC Office of Regulatory Research to perform EPR cold leg and hot leg large break LOCA analysis.</p> <p>a. Update the EPR model using the latest information provided by AREVA. Meet with NRC TM to discuss the status of the work.</p> <p>b. Finalize the model change with detailed steady state calculation and document all the changes in a complete written report with a proper QA review.</p> <p>c. In parallel of Task 5.c, use the EPR model to perform the EPR cold leg and hot leg large break LOCA scoping analyses until the long term cooling is achieved.</p> <p>d. After the completion of Task 5.b and Task 5.c, finalize the EPR LBLOCA analysis and prepare a complete written report with a proper QA review. The detailed calculation report shall describe the detailed progression of the LBLOCA scenario and consolidate Task 5.b report with this report.</p> <p>e. Provide a Power Point presentation summarizing the calculation results of the final EPR calculation report and meet with NRC technical staff to discuss any findings.</p> <p>f. Travel to NRC to participate in a meeting with ACRS. Prepare a summary meeting notes.</p> <p>Note: NRC TM will determine what computer code would be used to perform the analysis at the initiation of this task.</p>	<p>One week after authorization of work or receiving the latest AREVA EPR information.</p> <p>Three weeks after initiation of Task 5.a.</p> <p>Three weeks after authorization of work.</p> <p>Four weeks after completion of Task 5.c</p> <p>One week after completion of Task 5.d</p> <p>Per TM direction</p>	<p>Provide a summary sheet documenting the model changes.</p> <p>Provide a complete model update report.</p> <p>Provide a calculation summary sheet documenting the key changes.</p> <p>Provide a complete EPR LBLOCA analysis report.</p> <p>Power Point presentation.</p> <p>ACRS meeting notes.</p>

* These Work Schedules are subject to change by the NRC Contracting Officer (CO), Project Manager (NRC PM) and Technical Monitors to support the needs of the NRC Licensing

Program Plan.

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:

1. All key technical staff including the project manager must have the following technical qualifications:

- Extensive expertise of using RELAP-5 and TRACE code to perform PWR steady state, LOCA and AOO analyses;

Minimum qualification: Each of the proposed personnel should have analyzed at least four different PWR units. For each unit, the proposed candidate should have analyzed at least SBLOCA and LBLOCA and two most DNBR limiting transients. The qualification statements shall be substantiated by technical reports prepared by the proposed personnel.

- Extensive knowledge of RELAP-5 and TRACE code internal numerical schemes and physical models;

Minimum qualification: Each of the proposed personnel should have at least participated in the RELAP-5 code and TRACE code development work. The work experience needs to be substantiated by technical reports prepared by the proposed personnel. The reports need to demonstrate the depth of the numerical scheme and the model development work, the impact of the model on code performance and the associated assessment work. Technical papers or reports, including publications are considered essential evidence to demonstrate the person's qualification.

- Extensive regulatory analysis and review experience with SRP Chapter 15 and associated PWR safety systems.

Minimum qualification: The review work performed by the proposed staff is related to PWR Chapter 15 submittals. The qualification needs to be substantiated by TER reports or other relevant technical reports.

2. The project manager shall be on a part time basis (30% of his/her full time work load).

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) and Contracting Officer (CO) 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, TAPM 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 WordPerfect 10.0 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 TAPM 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 No.: Q-4159; Task Order No.: __; the applicant: _____; and, the site: _____.

7.0 MEETINGS AND TRAVEL

Two three-person, one-day working meeting to kickoff project and contractor orientation at NRC headquarters.

One two-person, 5-day on-site DCD review trip to Lynchberg, VA.

One three-person, two-day meeting with ACRS.

Note: At the discretion of the NRC TM, meetings may be conducted via telephone or video conference or changed.

8.0 NRC FURNISHED MATERIAL

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

- a. CD-ROM containing AREVA EPR DCD Chapter 15 sections and the relevant supporting materials from the DCD application.
- b. CD-ROM containing the Final Safety Evaluation Report of the DCD.

9.0 LEVEL OF EFFORT

The estimated level of effort in professional staff days apportioned among the tasks and by labor category is as follows:

<u>Task(s)</u>	<u>Labor Category</u>	<u>Level of Effort FY-08 (hours)</u>
1	Technical Reviewers	[REDACTED]
2	Technical Reviewers	[REDACTED]
3	Technical Reviewers	[REDACTED]
4.a	Technical Reviewers	[REDACTED]
4.b	Technical Reviewers	[REDACTED]
4.c	Technical Reviewers	[REDACTED]
4.d	Technical Reviewers	[REDACTED]
4.e	Technical Reviewers	[REDACTED]
4.f	Technical Reviewers	[REDACTED]
4.g	Technical Reviewers	[REDACTED]
5.a	Safety Analysts	[REDACTED]
5.b	Safety Analysts	[REDACTED]
5.c	Safety Analysts	[REDACTED]
5.d	Safety Analysts	[REDACTED]
5.e	Safety Analysts	[REDACTED]
5.f	Safety Analysts	[REDACTED]
Task 1-5	Project Manager	[REDACTED]
Total		2980

10.0 PERIOD OF PERFORMANCE

The projected period of performance is twelve months from the date of task order award.

11.0 EVALUATION CRITERIA

The NRC will award a task order to the offeror whose proposal is determined to offer the best value to the Government, cost and other factors considered. Cost is considered a substantial factor, but is less important than the non-price factors listed below. Cost will not be scored. If there are no other significant technical differences among offerors, cost alone will be the determining factor for source selection.

CRITERIA:

1. Personnel Qualification/Experience (100 points)

Key personnel qualification and experience in the area of RELAP-5 and TRACE code internal numerical schemes; and physical models and regulatory analysis and review experience with SRP Chapter 15 and associated PWR safety systems.

12.0. 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 is based on the volume of materials to be reviewed; Task 1. is for familiarity and not for evaluation.
- The level of effort for Task 4 is based on the assumption that the contractor is familiar with the review procedures of SRP 15.0-15.4.
- All meetings and travels are estimated based on the current project plan which may subject to change.
- It is assumed that the contractor has access to the NRC furnished material.
- 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.