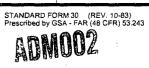
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	ENDMENT/MODIFICATION NO. 02	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. N 42-07-481 (009) M2 NRO-08-231	0.	5. PROJECT NO.(If applicable)
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N NU	J NUMARK ASSOCIATES INC.	i Migratina di Santa		9B. DATED (SEE ITEM 11)		
12	20 19TH ST NW STE 500 5730 4730 473			10A MODIFICATION OF CON NRC-42-07-481 00		
ΑW	SHINGTON DC 200362444 6 2004 6			10B. DATED (SEE ITEM 13)	·	
CODE		FACILITY CODE		X 04-28-2008		
	11. THIS ITEM	ONLY APPLIES TO	AMENDMENTS OF SOI	LICITATIONS		
RES by t	er submitted; or (c) By separate letter or telegram whowLEDGMENT TO BE RECEIVED AT THE PLACE SULT IN REJECTION OF YOUR OFFER. If by virtual legram or letter, provided each telegram or letter in a late specified. COUNTING AND APPROPRIATION DATA (If required) B& An	DESIGNATED FOR THE R e of this amendment you destakes reference to the solicita	ECEIPT OF OFFERS PRIOR sire to change an offer already atlon and this amendment, and	TO THE HOUR AND DATE submitted, such change ma is received prior to the ope 52A	SPECIFIED MAY by be made	
		LIES ONLY TO MODI	FICATIONS OF CONTR	RACTS/ORDERS,		
(X)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify a	uthority) THE CHANGES SET FORTH	I IN ITEM 14 ARE MADE IN THE CONTR	ACT ORDER NO. IN ITEM 10A.	a, Ma	
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO SET FORTH IN ITEM 14; PURSUANT TO THE AUTHORITY OF FA	REFLECT THE ADMINISTRATIVE CIR 43.103(b).	HANGES (such as changes in payir	ng office, appropriation date, etc.)		
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURS	et dings, was egan	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	<u>. 1879 - Jan I. I., w</u>	(<u>6. 1 </u>	
х	D. OTHER (Specify type of modification and authority) Puri		2 Changes: Cost-Reimbu			
E. 11	MPORTANT: Contractor	required to sign this docume	ent and return 2 co	ppies to the issuing office.		
The fund year Ceil	purpose of this modification #2 is purpose of this modification #2 is ding in the amount of \$85,000; 3) add as. The changes will be reflective ling Amount: \$250,394 (changed) agation amount: \$235,500 (changed) and of Performance: April 28, 2008 to	to 1)provide for an task 3a to the statin a revised statement	increase to the ceiling ement of work; and to the control work that is at the control of the con	ng of \$82,582; 2)pr add 533 hours of e	ffort over two fir	
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	ot as provided herein, all terms and conditions of the document reference		Table 1			
15A. N	A LOS DE LA CONTRACTOR	sidat	18A NAME AND TITLE OF CONTRAC Kala Shankar Contracting Offic	State to a final control	· · · · · · · · · · · · · · · · · · ·	•
15B. C	CONTRACTOR/OFFEROR (Signature of person authorized to sign)	15C. DATE SIGNED.	16B. UNITED STATES OF AMERICA BY (Signature of C	Contracting Officer)	16C. DATE SIGNED	

NSN 7540-01-152-8070 PREVIOUS EDITION NOT USABLE



The purpose of this modification is to (1) increase the task order ceiling by \$82,582 (2) obligate \$85,000 in FY 08 funds (3) add task 3a to the SOW. This modification also provides for a revised statement of work. Accordingly, the subject task order is hereby modified as follows:

Paragraphs 2 and 3, page 2 of 2 under the base task order 9, are hereby deleted in its entirety and replaced with the following:

Task Order No. 9 shall be in effect one year from date of award, with a cost ceiling of \$250,394. The amount of \$243,542 represents the estimated reimbursable costs, and the amount of \$6,852 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$235,500, of which \$229,756 represents the estimated reimbursable costs, and the amount of \$5,744 represents the fixed fee.

A summary of obligations for this task order, from award date through the date of this action is given below:

Total FY08 Obligation Amount: \$235,500.00 Cumulative Total of NRC Obligations: \$235,500.00

ALL OTHER TERMS AND CONDITIONS OF THE SUBJECT TASK ORDER REMAIN UNCHANGED

TASK ORDER STATEMENT OF WORK

JCN	Contractor	Task Order No.		
Q-4159	NUMARK	NRC-42-07-481 (009) (Mod 2)		
Applicant	Design/Site	Docket No.		
Areva	US EPR/NA	052000020		
Title/Description				
AREVA EPR DC - Technic	al Assistance for Leak Before Break	k Design Certification Review (SRP 3.6.3)		
TAC No.	B&R Number	SRP Section(s) or ESRP		
RX0235	825-15-171-103	3.6.3		
NRC Task Order Project Officer (PO)				
David D'Abate	301-415-0667	301-415-0667 David.DAbate@nrc.gov		
NRC Technical Monitor (TM)				
Eric Reichelt	301-415-7632	Eric.Reichelt@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 review SRP section 3.6.3.

3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES

	Tasks/Standards	Scheduled Completion	Deliverables
1	REQUIREMENT: Become familiar with SRP Section 3.6.3.	* Two weeks after authorization of	Documentation that assigned
	STANDARD: Written confirmation that familiarization is complete	work.	personnel have reviewed references

1

		Scheduled Completion	Deliverables
2.	•	* Three weeks after authorization of work.	N/A
, 	STANDARD: Attendance by individuals designated by NRC.		
3.	REQUIREMENT: Review the <u>DC</u> application Section 3.6.3 to determine the adequacy of the proposed design. 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 a Technical Evaluation Report.	* Twelve weeks after the end of Task 2.	Technical Evaluation Report and RAIs, if applicable
	STANDARD: Completed Technical Evaluation Report that follows the NRC provided template without deviation. No deviation from the guidance defined in Section III, RAI Guidance of Attachment1. One round of comment incorporation is acceptable.		la dispersión de la company de
3a.	perform an LBB confirmatory analysis for the pressurizer surge line. Compare results of the confirmatory analysis with results from AREVA's KRACKFLO program. Identify issues and the need for any additional information, RAI's. Identify those aspects of AREVA's analysis, assumptions		Technical Letter Report, RAIs (if applicable) and input to Technical Evaluation Report
	that require clarifying information. Prepare a Technical Letter Report of the confirmatory analysis summarizing the results and conclusions.	indicas en la companya de la companya del companya del companya de la companya de	Market paker Market San Barret
	NOTE: Results of confirmatory analysis will be documented in the completed Technical Evaluation Report on LBB.		
4.	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	after receipt of the responses.	Revised Technical Evaluation Report
	STANDARD: Completed Technical Evaluation Report that follows the NRC provided template without deviation. No deviation from the guidance defined in Section III, RAI Guidance of Attachment1. One round of comment incorporation is acceptable.		

		Scheduled Completion	Deliverables
5.	REQUIREMENT: (If applicable) Prepare for and travel to the applicant's office and participate in an NRC review team to:	* Five weeks after receipt of response.	
}: 	a. TBD If Required, Audit the information/calculations as described in the DCD application.	ı	
	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.	Two weeks after	TripiReport
	STANDARD: Complete evaluation as defined in Task. Submit Trip Report within two (2) weeks of site of the review.	the trip.	The Property of the Control of the C
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 prepare a safety evaluation report w/open items if any, as a Technical Evaluation Report.	* Twelve weeks after receipt of responses.	Safety Evaluation Report Input w/open items
	STANDARD: Complete Technical Evaluation Report that follows the NRC provided template without deviation.	yace was	of the second of
7.	REQUIREMENT: As needed and requested by the staff, provide technical support to the staff during related ACRS meetings and hearing proceedings.	TBD	Prepare Presentation Materials. Attend Meetings, if
	STANDARD: Ensure presentation materials are reviewed and approved by NRC staff.		required
8.	REQUIREMENT: As needed resolve remaining open items and prepare a technical evaluation report (TER) addressing the open items.	TBD	

^{*} 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 instructions 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

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educational background and work experience to meet the objectives of the work specified in this task order. Specific qualifications for this effort include:

A senior-level Materials Engineer with experience in fracture mechanics.

The contractor shall provide a contractor project manager (PM) to cversee 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 No.: Q-4159; Technical Assignment Control No. (TAC): RX0235; Task Order No.: 009; the licensee: AREVA NP; and, the site: N/A.

- 1. At the completion of Task 3, submit a Technical Evaluation Report (TER) that contains, for each Sub-section of the SER (see **Attachment 1** for the outline, format and content of the report): a description of the information proposed by the applicant including the assumptions for the analysis, design, and references to consensus standards: review findings (including the basis for the findings), as a result of comparison with the review guidelines: and a list of "Requests for Additional Information (RAIs). See **Attachment 1** in the base contract SOW for the guidelines for developing RAIs.
- 2. At the completion of Task 4, submit a TER (see Attachment 1) that contains a summary of

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the review results and the updated report completed under Task 3 incorporating the findings from 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, submit a TER (see Attachment 1) that contains a safety evaluation report with open items resulting from the work performed in Task 4 & 5, and update of the Technical Evaluation Report developed under Task 5.

6.0 MEETINGS AND TRAVEL

- One one-person, three-day working meeting to kickoff project and contractor orientation.*
- (If required) One, one-person, five-day trip to the applicant's facility (Tasks 5).
- One one-person, three-day working meeting at NRC headquarters to review deliverables*
- One, one-person, three-day meeting, if <u>needed</u>, 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 R-COL Sections and the relevant Appendices from the R-COL application.
- b. CD-ROM containing the Final Safety Evaluation Report of the DCD.

8.0 LEVEL OF EFFORT

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

Task(s)	<u>Labor Category</u>	Level of Effort FY-08 (hours)	Level of Effort FY-09 (hours)
1	Senior Materials Engineer	40	0
2	Senior Materials Engineer	40	0
3' 1' 4' 9' 1' 1/4'	Senior Materials Engineer	339	0
3a	Senior Materials Engineer	100	406
4	Senior Materials Engineer	40	0
5	Senior Materials Engineer	32	40
6:37-0, 3-11	Senior Materials Engineer	0 9 20 20 30	100
7 To 2019 Str.	Senior Materials Engineer	0	32 9 (32)
800 100 100	Senior Materials Engineer	0	50 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Task /1 - 8 🐇	Project Manager	30	45
Task 1 – 8	Admin/Tech Editing	2 · V 1. Hab 0	17 50448302 - 18 - 17
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9.0 PERIOD OF PERFORMANCE

The projected period of performance is 12 months from date of task order award.

10.0. OTHER APPLICABLE INFORMATION

a. License Fee Recovery

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

b. Assumptions and Understandings:

The level of effort for Task 1 is based on the volume of materials to be reviewed; this task is for familiarity and not for evaluation.

The level of effort for Task 3 is based on the assumption that the contractor is familiar with the review procedures of (ESRP/SRP) Sections 3.6.3.

The level of effort for Task 4 is based on the assumption that there will be 50 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, five-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 20 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.

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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.

Attachments:

- 1. Outline, Format, and Content for the TER Input
- 2. Guidelines for Requests for Additional Information (RAIs)

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Attachment 1 Outline, format, and sample for the TER (draft SER input)

X.Y.Z Title of Section

X.Y.Z.1 Regulatory Criteria

Develop an outline that follows the format and topics presented in the AREAS OF REVIEW section of the appropriate SRP section. This information will correspond to the SRP sections that are the subject of this Task Order. For each unique SRP review area contained in the TER, the contractor should specify the acceptance criteria that were used for its review. Summarize the applicable regulations and other regulatory references, including regulatory guides, generic letters, or NRC staff positions, that are relevant to this topic.

Technical reviewers are encouraged to use the descriptions of acceptance criteria from previously issued Safety Evaluation Reports for completed design certifications (e.g., NUREG-1793 for the AP1000 Final Safety Evaluation Report) when applicable.

X.Y.Z.2 Summary of Technical Information

Describe the key technical points that were made in the application. It is not necessary to restate the application verbatim or to address all the details in the application.

X.Y.Z.3 Technical Evaluation

Document the contractor's evaluation of the application against the relevant regulatory criteria. The evaluation should support the contractor's conclusions as to whether the regulations are met. State what the contractor did to evaluate the applicant's submittal. The contractor's evaluation may include verification that the applicant followed applicable regulatory guidance, performance of independent calculations, and validation that the appropriate assumptions were made. The contractor may state that certain information provided by the applicant was not considered essential to the contractor's review and was not reviewed by the contractor. While the contractor may summarize the information offered by the applicant in support of its application, the contractor should clearly articulate the bases for its conclusions.

Contractor should provide a clear and concise description of any request for additional information (RAIs). The description should include a justification of the requested information that the requested information is not provided in the application and is absolutely needed to determine or confirm whether the relevant regulatory requirements (articulate specific requirements) have been met. The contractor should discuss its technical evaluation of the licensee's response to the RAIs and determine whether it is acceptable. The contractor should clearly articulate the bases for its acceptance or rejection. If the RAI response is not acceptable, it will be classified as an open item. All open items will be resolved in Phase 3.

X.Y.Z.4 Conclusions was not

Summarize the contractor's conclusions regarding the application, including words such as the following: As set forth above in Sections X.Y.Z.2 and X.Y.Z.3 of this report, [provide specific bases for conclusions that follow]. Accordingly, the staff concludes that the application meets [or, if applicable, does not meet] the relevant requirements of 10 CFR Part XX and is [or, if applicable, is not] acceptable.

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X.Y.Z.5 References

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Attachment 2 Guidelines for Requests for Additional Information (RAIs)

Additional information necessary to resolve open or unresolved items identified during the review of the information associated with the steam dryer failure and modification needs to be requested in a manner that is unambiguous, has an adequate basis, and is necessary for the safety review. The technical letter report should provide a list of RAIs using the following guidance:

- 1. An RAI should include the appropriate basis for requesting the information. The basis should explain why the information is needed, including how it will be used to help make a reasonable assurance finding.
- 2. Judgmental language should be avoided.
 - a. Questions should not make adequacy determinations.
 - b. Words like "unacceptable" or "deficient" and "deviation" should be avoided. Likewise, avoid using phrases like "the staff will require" since it is premature to require anything when asking questions.
- 3. Questions should be focused, not open-ended.
 - a. The RAI should be in the form of a question or an imperative to provide what is needed to complete the review. When the reviewer needs specific information or the underlying issue may not be apparent, the RAI should clearly identify the information requested and/or the underlying issue.
 - b. "If ... then" questions (questions that could lead to follow-on questions) should provide both parts of the question.

After the RAIs have been forwarded to the applicable NRC Project Manager, teleconferences and/or public meetings may be held before issuing the RAIs:

- a. These discussions prevent misunderstandings of the intent of the questions.
- b. If a draft RAI is clarified or resolved before issuance, the NRC staff will prepare a documented record of the resolution (i.e., minutes of a public meeting or a teleconference summary).

After the RAIs have been issued, licensee may request a telephone conference and/or a public meeting:

- a. The teleconferences and/or meetings provide additional clarification of the intent of the RAIs and will help licensees prepare satisfactory responses.
- b. To ensure that the response appropriately addresses the RAI, the licensee may submit a draft response (which the NRC Project Manager dockets in the Agency-Wide Documents Access and Management System (ADAMS)) and may request a follow-up teleconference and/or meeting.

After receiving licensee's response to the RAI, the NRC Project Manager may hold a teleconference and/or a public meeting:

- a. The purpose of discussing a response with licensee is to better understand the response and/or clarify areas of disagreement. If the resolution of a response relies on information not submitted to the NRC, the licensee should submit the information on the docket. The submission is not intended to be another RAI or a means to minimize the number of SE open items, but frequently reduces the number of SE open items.
- b. If the areas of disagreement remain, the unresolved RAI becomes an SE open item.