

ORDER FOR SUPPLIES OR SERVICES

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

BPA NO.

1. DATE OF ORDER JUN 05 2009		2. CONTRACT NO. (if any) NRC-42-07-481		6. SHIP TO:	
3. ORDER NO. 0061		MODIFICATION NO.		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, 301-492-3638 Mail Stop TWB-01-B10M Washington, DC 20555		4. REQUISITION/REFERENCE NO. 42-07-481T061 NRO-09748161012		b. STREET ADDRESS Attn: Sally Adams, 301-415-0209	
7. TO:		c. CITY Washington		d. STATE DC	e. ZIP CODE 20555
a. NAME OF CONTRACTOR N J NUMARK ASSOCIATES INC NUMARK ASSOCIATES		b. COMPANY NAME		f. SHIP VIA	
c. STREET ADDRESS 1220 19TH ST NW STE 500		d. CITY WASHINGTON		e. STATE DC	f. ZIP CODE 200362444
9. ACCOUNTING AND APPROPRIATION DATA 925-15-171-111; Q-4012; 252A; 31X0200 Obligate \$25,000 Contractor DUNS: 788247377		10. REQUISITIONING OFFICE NRO		8. TYPE OF ORDER	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))		12. F.O.B. POINT Destination		<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.	
<input checked="" type="checkbox"/> a. SMALL <input type="checkbox"/> d. WOMEN-OWNED		<input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> e. HUBZone		<input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> f. EMERGING SMALLBUSINESS <input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED	
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. 61 under Contract No. NRC-42-07-481 Title: "Review of Sections 3.10 and 3.11 of SCOL for Callaway Unit 2 Nuclear Power Plant for Electrical Equipment" Period of Performance: 06/08/2009 - 06/07/2010 Estimated Reimbursable Cost: \$42,510.00 Fixed Fee: \$2,975.00 Total Cost Plus Fixed Fee: \$45,485.00 Funding in the amount of \$25,000 is being provided. See continuation pages					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages) 17(i) GRAND TOTAL
	21. MAIL INVOICE TO:						
	a. NAME U.S. Nuclear Regulatory Commission See Attachment 7 of the basic contract						
	b. STREET ADDRESS (or P.O. Box) Attn: (NRC-42-07-481-T061)						
c. CITY Washington		d. STATE DC	e. ZIP CODE 20555		\$25,000.00		

22. UNITED STATES OF AMERICA BY (Signature) Kala Shankar	23. NAME (Typed) Kala Shankar Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER
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PREVIOUS EDITIONS NOT VALID

SUNSI REVIEW COMPLETE JUN 22 2009

OPTIONAL FORM 347 (REV. 10-01-08)
PRESCRIBED BY GSA FPMR (41 CFR) 101-11.6

ADM002

In accordance with Section G.4, Task Order Procedures, of Contract No. NRC- 42-07-481, this definitizes Task Order No. 61. The effort shall be performed in accordance with the attached Statement of Work.

Task Order No. 61 shall be in effect twelve months from date of award, with a cost ceiling of \$45,485. The amount of \$42,510 represents the estimated reimbursable costs, and the amount of \$2,975 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$25,000, of which approximately \$23,364 represents the estimated reimbursable costs, and the amount of \$1,636 represents the fixed fee.

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

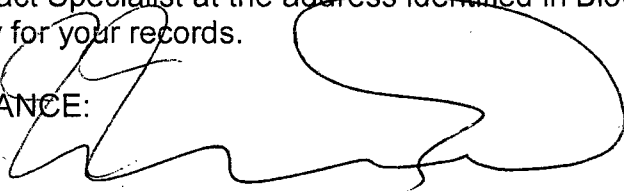
Your contacts during the course of this task order are:

Technical Matter: Sally Adams
Project Officer
301-415-0209

Contractual Matters: Kala Shankar
Contract Specialist
301-492-3638

Acceptance of Task Order No. 61 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

President

TITLE

6/8/09

DATE

TASK ORDER STATEMENT OF WORK

JCN Q-4012	Contractor Numark Associates, Inc.	Task Order No. NRC-42-07-481 (061)
Applicant Ameren UE	Design/Site EPR/Callaway (Unit 2)	Docket No. 5200037
Title/Description Review of Sections 3.10 and 3.11 of SCOL for Callaway Unit 2 Nuclear Plant for Electrical Equipment		
TAC No. RX0650	B&R Number 925-15-171-111	SRP or ESRP Section(s) 3.10, 3.11
NRC Task Order Project Officer (PO) David D'Abate		
301-415-0667		David.DAbate@nrc.gov
NRC Technical Monitor (TM) Swagata Som		
301-415-8491		Swagata.Som@nrc.gov

1.0 BACKGROUND

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

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. In addition, the NRC staff has prepared Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," to provide guidance for submitting information in COL applications. The principal purpose of the Standard Review Plan (SRP) and Regulatory Guides (RG) is to assure the quality and uniformity of staff safety 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 SCOL application meets appropriate regulatory requirements. Specifically, technical assistance is required to review SCOL application Sections 3.10 (Seismic and Dynamic Qualification of Mechanical & Electrical Equipment) and 3.11 (Environmental Qualification of Mechanical & Electrical Equipment). The Contractor will provide the technical assistance for review of electrical (I&C included) equipment only as the primary reviewer for Section 3.11 and as a secondary reviewer for Section 3.10.

3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES

Tasks/Standards	Scheduled Completion	Deliverables
1. REQUIREMENT: Become familiar with NRC regulations (10 CFR 50 and 52) and staff review guidance documents that include Regulatory Guides (RGs), and IEEE Standards in SRP Chapter 3.10, and SRP Chapter 3.11, FSAR (DCD) for EPR. STANDARD: Written confirmation that familiarization is complete	* 2 weeks after authorization of work	Documentation that assigned personnel have reviewed references

Tasks/Standards	Scheduled Completion	Deliverables
<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>	TBD	N/A
<p>3. REQUIREMENT: Review the SCOL application Sections 3.10 and 3.11 in detail to determine the electrical equipment (including I&C) can perform their design safety function under all environmental conditions. 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). Prepare RAIs and a draft Technical Evaluation Report.</p> <p>a. Prepare draft questions as input to a formal RAI</p> <p>b. Prepare a draft Technical Evaluation Report (DTER) to support the staff's preliminary SER with RAIs. The DTER is written in a manner that the conclusion of acceptability is well supported by the basis in accordance with the staff guidance documents.</p> <p>STANDARD: Completed Technical Evaluation Report that follows the NRC provided template without deviation. No deviation from the guidance defined in Section III of RAI Guidance (Attachment 1) of Contract Statement of Work. One round of comment incorporation is acceptable.</p>	*6 weeks after authorization of work	Draft Technical Evaluation Report and RAIs
<p>4. REQUIREMENT: Review response to the RAIs to determine if they adequately resolve the outstanding issues and write any supplementary RAI if required to resolve these issues. Identify any other open items. Incorporate the review results in the evaluation report completed under Task 3.</p> <p>STANDARD: Completed Technical Evaluation Report that follows the NRC provided template without deviation. No deviation from the guidance defined in Section III of RAI Guidance (Attachment 1) of Contract Statement of Work. One round of comment incorporation is acceptable.</p>	* 2 weeks after receipt of the responses.	Revised Technical Evaluation Report
<p>5. REQUIREMENT: Review the applicant's response to the open items identified as a result of the design audit (Task 4) if any. Identify any unresolved issues and prepare a safety evaluation report w/open items if any, as a Technical Evaluation Report.</p> <p>STANDARD: Complete Technical Evaluation Report that follows the NRC provided template without deviation.</p>	* 3 weeks after receipt of responses	Update TER w/open items
<p>6. REQUIREMENT: As needed and requested by the staff, provide technical support to the staff at meetings with the applicant and phone calls and during related ACRS meetings and hearing proceedings.</p> <p>STANDARD: Ensure presentation materials are reviewed and approved by NRC staff.</p>	TBD	Prepare Presentation Materials. Attend Meetings, if required

* 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 extensive work experience to meet the objectives of the work specified in this task order. Specific qualifications for this effort include:

- A strong background in electric power systems theory, principles, and design practices to review the design of electric power systems and components needed for safe nuclear power plant operation and safe shutdown during normal, transient, and accident conditions as described in the DC/SCOL applications and to determine its compliance with relevant NRC requirements.
- In depth knowledge of the new reactors licensing processes such as US EPR, US APWR, ABWR and AP1000
- Experience in nuclear power plants design, operation and/or inspection and thorough knowledge of the plant structures, systems and components
- Extensive knowledge in seismic and dynamic qualification of mechanical and electrical equipment and environmental qualification of mechanical and electrical equipment, including knowledge of Regulatory Guides and IEEE Standards, preferably participation in development of such guides and standards.
- Extensive knowledge of the EQ Rule, Licensing Rule, and applicable industry standards, in-depth knowledge of the Standard Review Plan on Chapter 3.10 and 3.11.
- Extensive knowledge of (1) Class 1E electrical power systems of nuclear power plants, (2) the regulatory requirements for the design of onsite, offsite and auxiliary power systems and its inter connections to the nuclear unit and the grid
- In-depth knowledge of the seismic qualification of nuclear plant equipment, participation in resolution of emerging technical concerns and generic safety issues

The contractor shall provide a 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 semi-monthly 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.: Q4012; Technical Assignment Control No.: RX0650; Task Order No.: 061; the licensee: Ameren UE; and site: Callaway Unit 2.

1. At the completion of Task 3, submit a draft 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 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 TER (see **Attachment 1**) that contains a safety evaluation report with open items resulting from the work performed in Task 4.

6.0 MEETINGS AND TRAVEL

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

One person, 1-day, working meeting, if needed, at NRC headquarters to review deliverables*

One person, 1-day, meeting, 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 material(s) will be provided to the contractor together with SOW:

- CD-ROM containing DC/SCOL Sections and the relevant Appendices from the DC/SCOL application.

8.0 LEVEL OF EFFORT

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

Task(s)	Labor Category	Level of Effort FY09 hours DC/SCOL	Level of Effort FY10 hours
1	Senior EQ Engineer	20	0
2	Senior EQ Engineer	10	0
3	Senior EQ Engineer	50	0
4	Senior EQ Engineers	30	0
5	Senior EQ Engineer	30	0
6	Senior EQ Engineer	0	20
Task 1 – 6	Project Manager	15	5
Task 1 – 6	Administrative	10	10
Total 200 hours		165	35

9.0 PERIOD OF PERFORMANCE

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

10.0 EVALUATION FACTORS

- a. Extent to which the proposed staff have the technical qualifications specified to support the NRC's program areas delineated in Section 4.0.
- b. Technical qualifications are more important than cost. Cost will not be point scored; however, cost will be a considered.

11.0. 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 Tasks 3 is based on the assumption that the contractor is familiar with the review procedures of (SRP) Sections: 3.10, 3.11.

The level of effort for Task 4 is based on the assumption that there will be 10 RAIs and it will take, on the average, 2 hours to review and address each response.

The level of effort for Task 5 is based on the need to resolve open items.

The level of effort in Task 6 is based on requiring 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 Technical Evaluation Report (TER). The TER will serve as input to the NRC staff's Safety Evaluation Report (SER) which will document the NRC's technical, safety, and legal basis for approving the SCOL application. The TER must provide sufficient information to adequately explain the NRC staff's rationale for why there is *reasonable assurance* that public health and safety is protected. The TER, and ultimately the SER, should be written in a manner whereby a person with a technical (non-nuclear) background and unfamiliar with the applicant's request

could understand the basis for the staff's conclusions. The TER format is described in Attachment 1 to this Task Order Statement of Work.

Attachments:

1. Outline, Format, and Content for the TER Input

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.

Contractors 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

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.

X.Y.Z.5 References