

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 12

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

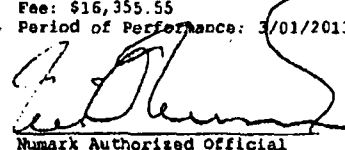
BPA NO.

1. DATE OF ORDER 02/28/2013		2. CONTRACT NO. (if any) NRC-MO-12-C-42-0107		6. SHIP TO:	
3. ORDER NO. NRC-T003		4. REQUISITION/REFERENCE NO.		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
b. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: P. Merriweather Mail Stop: TWB-01-B10M Washington, DC 20555				b. STREET ADDRESS	
7. TO:				a. CITY Washington	d. STATE DC
a. NAME OF CONTRACTOR NUMARK ASSOCIATES, INC				e. ZIP CODE 20555	
b. COMPANY NAME				8. TYPE OF ORDER	
c. STREET ADDRESS 1220 19TH ST NW, STE 500				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
d. CITY WASHINGTON				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 DC				Except for billing instructions on the reverse, this delivery order is subject to instructions contained on the side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
f. ZIP CODE 200362444				10. REQUISITIONING OFFICE NRO	
9. ACCOUNTING AND APPROPRIATION DATA 2013-25-17-4-118 Q4159 252A 31X0200 FFS:131045 DUNS 788247377				Obligate: 530,000.00 FSS:131280	

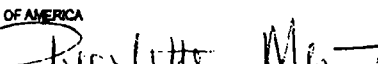
11. BUSINESS CLASSIFICATION (Check appropriate box(es))			12. F.O.B. POINT		
<input checked="" type="checkbox"/> a. SMALL	<input type="checkbox"/> b. OTHER THAN SMALL	<input type="checkbox"/> c. DISADVANTAGED	<input type="checkbox"/> d. WOMEN-OWNED	<input type="checkbox"/> e. HUBZone	N/A
<input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED	<input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM	<input type="checkbox"/> h. EDWOSB			

13. PLACE OF		14. GOVERNMENT B/L NO.		16. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)		18. DISCOUNT TERMS	
a. INSPECTION See Block 6	b. ACCEPTANCE See Block 6			9/30/2014		NET 30 DAYS	

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)
	The Contractor shall provide services in accordance with the attached SOW titled "Review of EPR Standard Design Certification Application PSAR Sections 3.7.1, 3.7.2, and 3. COR: Christine 301-415-2713 Christine.Briggs@nrc.gov PM: Marty Bowling 202.466.2700 mbowling@numarkassoc.com Total Order ceiling: 6264,562.55 Total Obligated Amount: 530,000.00 Estimated Reimbursable Cost: \$248,297.00 Fee: \$16,355.55 Period of Performance: 3/01/2013-9/30/2014  Numark Authorized Official				See CONTINUATION Page	

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
	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	\$265,632.55		17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature) 	23. NAME (Typed) Pearlette Merriweather Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER
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AUTHORIZED FOR LOCAL REPRODUCTION PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 347 (REV. 2/2012) PRESCRIBED BY GSA/PMR 48 CFR 53.213(f)

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

MAR 05 2013

ADM002

NRC-HQ-12-C-42-0107 NRC-T003

In accordance with SECTION G.4, Task Order Procedures, of Contract NRC-HQ-12-C-42-0107, this definitizes Task Order No.03. The effort shall be performed in accordance with the attached statement of work.

Task Order No. 03 shall be in effect eighteen months from date of award, with a cost ceiling of \$264,562. The amount of \$248,297.00 represents the estimated reimbursable costs, and the amount of _____ represents the fixed fee.

The amount obligated by the Government with respect to this order is \$30,000.00, of which approximately \$ _____ represents the estimated reimbursable costs, and the amount of _____ represents the fixed fee.

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

TASK ORDER STATEMENT OF WORK

JCN Q-4159	Contractor Numark Associates, Inc.	Task Order No. (NRC-HQ-C-42-0107) TO # 3
Applicant AREVA NP Inc.	Design/Site EPR	Docket No. 052000020
Title/Description Review of EPR Standard Design Certification Application FSAR Sections 3.7.1, 3.7.2, and 3.7.3 for Seismic Design		
TAC No. RX0131	B&R Number 2013-25-17-4-118	SRP or ESRP Section(s) 3.7
NRC Contracting Officer Representative (Administrative) Christine Briggs 301-415-2713 Christine.Briggs@nrc.gov		
NRC Contracting Officer Representative (Technical) Jim Xu (301) 415-3024 Jim.Xu@nrc.gov		

1.0 BACKGROUND

The Office of New Reactors (NRO) is responsible for accomplishing key components of the Nuclear Regulatory Commission's nuclear reactor safety mission for new reactor facilities licensed in accordance with 10 CFR Part 52. As such, NRO is responsible for regulatory activities in the primary program areas of new reactor licensing including application reviews for reactor design certification (DC), early site permits (ESPs), combined operating license (COL) applications, and new reactor pre-application activities. 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 NRC reviews DC applications based on information furnished by nuclear steam supply system vendors pursuant to 10 CFR 52.47, "Contents of Applications."

A safety Standard Review Plan (SRP) (NUREG-0800) was 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 the NRC staff safety reviews.

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

As part of Task Order 25 under JCN Q4159, the contractor provided technical assistance related to the Review of the seismic analysis for structures of the U.S. EPR Final Safety Analysis Report (FSAR). Requests for additional information (RAIs) were developed and a technical evaluation report (TER) with open items was prepared. Responses to some of the RAIs were received from the applicant and reviewed by the contractor. The contractor will continue the technical assistance under this new agreement/contract, resolving the remaining open items once all RAI responses are provided by the applicant, perform technical audits, finalize the TER, and support Advisory Committee on Reactor Safety meetings as required.

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 design certification application meets appropriate regulatory requirements relating to Sections 3.7.1, 3.7.2, 3.7.3 and the associated Tier 1 information of the FSAR submitted with the EPR DC application.

Specifically, a review of SRP subsections 3.7.1, 3.7.2, and 3.7.3 is required to insure that the seismic analyses and design meet the applicable requirements of 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 2, 10 CFR Part 50, Appendix S and other applicable regulations. The review shall focus on the (1) seismic design parameters, (2) seismic input, (3) seismic model, (4) seismic system analysis including soil structure interaction analysis, (5) seismic subsystem analysis, and (6) computer programs used in the analysis of seismic category 1 structures. The level of effort for this task order is based on the expectation that the contractor is familiar with the review procedures of the SRP sections in the work scope and the technical reviewer has the required knowledge and experience in the subject matter as outlined in Section 5 of this document.

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's SER which will document the NRC's technical, safety, and legal basis for approving the design certification. The TER documents the contractor's technical evaluation of a proposed design against relevant regulatory criteria. The technical evaluation should include a description of the proposed design and an analysis of the proposal in terms of regulatory requirements, established NRC positions (e.g., SRP or regulatory guides), industry standards, or other relevant criteria. The contractor should explain the methods used in its review of the design (e.g., a comparison of applicant's proposal against regulatory criteria, a review of input assumptions combined with use of approved methodology, or an independent calculation to confirm results presented by an applicant). The technical evaluation should be specific as to what information is relied on to form the basis for approving or denying the proposed design. The technical evaluation should also contain the contractor's specific conclusion that the proposed design is technically acceptable and meets regulatory guidance or other industry standards or reasons why the proposed design is unacceptable. 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 (SOW).

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3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES

Tasks/Standards	Scheduled Completion	Deliverables
<p>14. REQUIREMENT: Perform review of updated RAI responses and FSAR mark-ups as a result of EPR seismic reanalysis and support NRC in telephone calls with the applicant in providing feedback on the RAI responses. In addition, review and resolve RAI issues raised in Section 3.8 which may affect 3.7 review at the direction of NRC COR Technical (Phase 4 task)</p> <p>STANDARD: Update RAI tracking table as RAIs are reviewed and resolved.</p>	<p>TBD based on current project schedule</p>	<p>Feedback on RAI responses</p>
<p>15. REQUIREMENT: Prepare for and travel to applicant's designated facility for on-site audits of applicant documents of new seismic analysis and discuss resolution of RAIs, as needed. These trips are intended to review analyses/calculations, and to discuss RAI issues, and to reduce the number of follow-up questions for resolution of RAIs. <i>[Multiple trips may be necessary based on project schedule.]</i> (Phase 4 task)</p> <p>STANDARD: Prepare audit plan, participate in audit, submit trip report, and update RAI tracking table and TER.</p>	<p>Trip duration is up to 5 days for each trip including travel time.</p> <p>Audit plan due two weeks before the trip</p> <p>Trip report due two weeks after the trip</p>	<p>Trip Report(s)</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>16. REQUIREMENT: Review AREVA proposed approach to address stability issues and NAB III issues. Review additional analyses and calculations for resolving remaining open RAI issues. Participate in technical discussions with AREVA through telecons, web-based go-to meetings or face-to-face meetings during audits as defined in Task 15. Revise TER to ensure all identified safety issues are resolved. (Phase 4 task)</p> <p>STANDARD: Update RAI tracking table as RAIs are reviewed and resolved. Revise TER.</p>	<p>TBD based on current project schedule</p>	<p>Feedback on RAI responses and revised TER</p>
<p>17. REQUIREMENT: Review AREVA proposed approach for addressing DNFSB raised issues regarding potential erroneous seismic response analyses using the SASSI subtraction method. Review AREVA analyses and calculations for justifying the seismic demand analyses applied in EPR seismic design. Participate in technical discussions with AREVA through telecons, web-based go-to meetings or face-to-face meetings, and audits as defined in Task 15. Resolve related RAI. Trips to NRC headquarters and applicant site may be needed. (Phase 4 task)</p> <p>STANDARD: Update RAI tracking table as RAIs are reviewed and resolved. Prepare trip reports and revise TER.</p>	<p>TBD based on current project schedule</p> <p>Duration of trips to NRC Headquarters is three days for each trip including travel time.</p>	<p>Feedback on RAI responses and revised TER</p> <p>Trip Reports</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>18. REQUIREMENT: Prepare final TER with no OI's (as an input to the staff's FSER) including addressing any ACRS questions, and participate in ACRS review meetings as requested by the TM. (Phases 4 and 5 task)</p> <p>STANDARD: Complete TER that follows the NRC provided template without deviation. Attend meetings, if requested.</p> <p>** This is new task, but falls within the existing scope of work**</p>	<p>TBD based on project schedule</p> <p>Duration of trip to NRC Headquarters is three days for each trip including travel time.</p>	<p>Final TER with no open items</p>
<p>19. REQUIREMENT: As needed and requested by the staff, provide technical support to the staff to prepare the FSER. (Phase 6 task)</p> <p>STANDARD: Provide technical support, if requested.</p> <p>** This is new task, but falls within the existing scope of work**</p>	<p>TBD as needed</p>	<p>N/A</p>

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

The COR 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 Contracting Officer (CO) and will be coordinated with the NRO COR.

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:

Senior structural engineers with knowledge and experience in vibration analyses, development of seismic ground motion spectra and consistent time histories, soils-structure interaction analyses, development of in-structure floor response spectra, linear and non-linear dynamic and seismic analysis of systems, structures and components of nuclear power plants using sophisticated computer codes.

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 COR'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 CORs and CO.

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

Technical reporting requirements

Unless otherwise specified above, the contractor shall provide all deliverables as draft products. The NRC COR 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 COR, and then deliver the final version of the deliverable. When mutually agreed upon between the contractor and the COR, 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 (upon request) and electronic formats. The electronic format shall be provided in MS Word or other word processing software approved by the COR. For each deliverable, the contractor shall provide one hard copy (upon request) and electronic copy to both the CORs and the CO. 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), if applicable RX0131 Task Order No.: 3; the licensee: AREVA NP Inc.; and, the site: n/a.

6.0 MEETINGS AND TRAVEL

The following travel assumptions should be considered in planning the work effort. Travel in excess of the total number of person-trips must be approved by the CO; travel within the work scope limits must be approved by the COR.

Two, 3-person, five-day trip to the applicant's facility to perform a design audit (Task 15)

Two, 3-person, three-day trip to NRC Headquarters (Task 18)

*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 Reference COL (R-COL) Subsequent COL (S-COL) ([R-COL] [S-COL] Sections and the relevant Appendices from the [R-COL] [S-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 hours apportioned among the tasks and by labor category is as follows:

Task(s)	Labor Category	Level of Effort FY-13 (hours)	Level of Effort FY-14 (hours)
14 - 19	Senior Structural Engineer	650	150
14 - 19	Project Manager	10	
14 - 19	Admin Support	10	
Total		670	150

9.0 PERIOD OF PERFORMANCE

The projected period of performance is from 3/1/2013 to 9/30/2014.

10.0. OTHER APPLICABLE INFORMATION

a. License Fee Recovery

All work under this task order is/is not fee recoverable and must be charged to the appropriate TAC number(s).

b. Expected Classification or Sensitivity

All work under this project is expected to be unclassified and not sensitive.

c. Assumptions and Understandings:

The level of effort is based on the assumption that 1) each audit at the applicant site will require five-day trip (including travel time) plus four days to prepare for the trips and to write the trip reports per person, 2) each trip to NRC Headquarters will require three-day (including travel time) plus one day for preparations per person, 3) the contractor reviews and resolves remaining RAIs issues, 4) the contractor prepares TER without open items, and 5) the contractor assists the staff in finalizing SER without open items.

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

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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 TER. The TER will serve as input to the NRC staff's SER which will document the NRC's technical, safety, and legal basis for approving the DC 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.

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 requests 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

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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