

ORDER FOR SUPPLIES OR SERVICES

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

BPA NO.

1. DATE OF ORDER		2. CONTRACT NO. (If any) NRC-42-07-481		6. SHIP TO:	
3. ORDER NO. 0007		MODIFICATION NO.		4. REQUISITION/REFERENCE NO. NRC-42-07-481(07)	
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				a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
				b. STREET ADDRESS Attn: Elinor Cunningham, 301-415-6580 Mail Stop: T6-F29	
		c. CITY Washington		d. STATE DC	e. ZIP CODE 20555
7. TO:				f. SHIP VIA	
a. NAME OF CONTRACTOR N J NUMARK ASSOCIATES INC NUMARK ASSOCIATES				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY REFERENCE YOUR Except for billing instructions on the reverse, this Please furnish the following on the terms and delivery order is subject to instructions conditions specified on both sides of this order contained on this side only of this form and is and on the attached sheet, if any, including issued subject to the terms and conditions delivery as indicated. of the above-numbered contract.	
c. STREET ADDRESS 1220 19TH ST NW STE 500		d. CITY WASHINGTON		e. STATE DC	f. ZIP CODE 200362444
9. ACCOUNTING AND APPROPRIATION DATA Attention NRC Accounting Office - see Block 17B for appropriation data Contractor DUNS: 788247377				10. REQUISITIONING OFFICE NRO	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT Destination	
<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		<input type="checkbox"/> f. EMERGING SMALL BUSINESS	
				<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. 7 under Contract No. NRC-42-07-481 Title: "Review of Containment and Ventilation (SPCV) Systems (VNT) for Reference COL Application" Period of Performance: 01/18/2008 - 07/17/2010 Estimated Reimbursable Cost: \$214,829 Fixed Fee: \$10,511 Total Cost Plus Fixed Fee: \$225,340 Funding in the amount of \$100,000 is being provided. ***Note to NRC Accounting Office*** ACCOUNTING AND APPROPRIATION DATA \$100,000 previously obligated under the base contract (NRC-42-07-481) is to be transferred to this Task Order. 72515171111; 4012; 252A; 31x0200; PFS:NRO-07-481					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.	
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-TO07)					
c. CITY Washington		d. STATE DC	e. ZIP CODE 20555		17(h) TOTAL (Cont. pages)
SEE BILLING INSTRUCTIONS ON REVERSE				\$ 225,340.00	
				17(i). GRAND TOTAL	

22. UNITED STATES OF AMERICA BY (Signature) <i>Kala Shankar</i>		23. NAME (Typed) Kala Shankar Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER	
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AUTHORIZED FOR LOCAL REPRODUCTION
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TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

JAN 22 2008

OPTIONAL FORM
PRESCRIBED BY GSA FPMR 48 CFR 53.213(f)

AD1002

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

Task Order No. 07 shall be in effect from 01/18/2008 through 07/17/2010, with a cost ceiling of \$225,340. The amount of \$214,829 represents the estimated reimbursable costs, and the amount of \$10,511 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$100,000, of which \$95,694 represents the estimated reimbursable costs, and the amount of \$4,306 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: Elinor Cunningham
Project Officer
301-415-6580

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

Acceptance of Task Order No. 07 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

1/18/08

DATE

TASK ORDER STATEMENT OF WORK

JCN/Contract No. Q-4012	Contractor Numark.	Task Order No. 7
Applicant UniStar	Design/Site EPR/Calvert Cliffs	Docket No. Project No. 746
Title/Description Review of Containment and Ventilation (SPCV) Systems (VNT) for Reference COL Application		
TAC No. (If fee recoverable)	B&R Number 825-15-171-111	SRP Section(s) Containment and Ventilation Sections (see Section 2)
NRC Technical Assistance Project Manager (TAPM) Elinor Cunningham (301) 415-6580 EMC3@nrc.gov		
NRC Technical Monitor (TM) Nan Chien DSRA (301) 415-2985 NPC1@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 7, 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. 7 under Contract No. NRC-42-07-481 to Numark Associates 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, RxF@nrc.gov, and NPC1@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

Combined Operating License (COL) Applications are submitted pursuant to Section 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 staff in determining the adequacy of the COL application relating to the EPR reference COL.

If directed by the NRC, the initial task will be to perform an Acceptance Review of the Combined License Application (COLA) to determine the completeness and technical sufficiency of the combined license application. This includes identifying major deficiencies in the application that might impact the review process or affect the planned resources and schedule. This review will be conducted in accordance with Office Instruction NRO-REG-100, "Acceptance Review Process for Design Certification and Combined License Applications", [ML071980027], sections 3.2.1, 3.2.3, and Attachment C. This acceptance review will be documented in the table, columns 1-6, 10 and 11, provided in attachment 2 to this Task Order Statement of Work (SOW).

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 SER which will document the NRC's technical, safety, and legal basis for approving the [COL] 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 shall be prepared using the NRC provided SER Template. A sample of the TER format is provided in Attachment 1 to this SOW.

The contractor will review the Bellefonte application for the Containment and Ventilation Branch 1 (SPCV) under its purview. The contractor has primary review responsibilities for the following SRP sections:

- 6.2.3 Secondary Containment Functional Design
- 6.4 Control Room Habitability System
- 9.4.1 Control Room Area Ventilation System
- 9.4.2 Spent Fuel Pool Area Ventilation System
- 9.4.3 Auxiliary and Radwaste Area Ventilation System
- 9.4.4 Turbine Area Ventilation System
- 9.4.5 Engineered Safety Features Ventilation System
- 14.3.11 Containment Systems and Severe Accidents – Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

In addition, the contractor will review applicable Containment and Ventilation Branch generic issues including NRC Bulletins and Generic Letters, TMI action Items, Task Action Plan, and New Generic Issues. For passive plants, the contractor will review the applicable Containment and Ventilation Branch Regulatory Treatment of Non-Safety systems (RTNSS).

3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES

Tasks/Standards	Scheduled Completion	Deliverables
<p>1. REQUIREMENT: Become familiar with SRP Sections 6.2.3, 6.4, 9.4.1, 9.4.2, 9.4.3, 9.4.4, 9.4.5, and 14.3.11.</p> <p>STANDARD: Written confirmation that familiarization is complete.</p> <p>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.</p>	<p>* 10 days after authorization of work</p>	<p>Documentation that assigned personnel have reviewed references.</p>
<p>2. REQUIREMENT: Participate in an orientation/kick-off meeting with the NRC staff to discuss the scope of the work, expectations and task order management.</p> <p>STANDARD: Attendance by individuals designated by NRC.</p>	<p>* 10 days after authorization of work</p>	<p>N/A</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>3. REQUIREMENT: Acceptance review. Support staff's acceptance review to determine the completeness and technical sufficiency of a combined license application. This includes identifying major deficiencies in the application that might impact the review process or affect the planned resources and schedule.</p> <p>STANDARD: Written documentation that review is complete.</p>	<p>* 15 days after receipt of application</p>	<p>Acceptance review results documented in Attachment 2</p>
<p>4. REQUIREMENT: Review the COL application Sections 6.2.3, 6.4, 9.4.1, 9.4.2, 9.4.3, 9.4.4, 9.4.5, and 14.3.11 to determine the adequacy of the containment design described in those sections. Determine if the methods and approach proposed by the applicant meet the appropriate review guidance. Identify issues and those aspects of the application that need additional or clarifying information, RAIs. Prepare a Technical Evaluation Report (TER).</p> <p>STANDARD: Completed TER that follows the NRC provided template without deviation. No deviation from the guidance defined in Section III, RAI Guidance of Attachment 1 to the basic contract SOW. One round of comment incorporation acceptable.</p>	<p>* 90 days after receipt of application</p>	<p>TER, and RAIs if applicable</p>
<p>5. REQUIREMENT: Review responses to the RAI questions to determine if they adequately resolve the outstanding issues. Identify any other open items. Prepare a TER providing the input to the SER with open items (SER/OI).</p> <p>STANDARD: Complete TER with open items</p>	<p>* 30 days after receipt of the responses.</p>	<p>Revised TER with open items</p>
<p>6. REQUIREMENT: Review the applicant's response to the open items identified in the SER/OI. Identify any unresolved issues. Prepare a TER providing the input to the final SER describing the resolution to the open items.</p> <p>STANDARD: Complete TER that follows the NRC provided template without deviation.</p>	<p>*45 days after receipt of responses to OIs</p>	<p>SER input with open items resolved</p>
<p>7. REQUIREMENT: Prepare final supplement with no open items.</p> <p>STANDARD: Supplement reviewed and approved by NRC staff.</p>	<p>10 days following ACRS review of supplement</p>	<p>Final supplement.</p>

Tasks/Standards	Scheduled Completion	Deliverables
<p>8a. REQUIREMENT: <i>(If applicable)</i> Prepare for and travel to the applicant's office and participate in an NRC review team to:</p> <p>a) Audit the <u>TBD</u> as described in the R-COL for Calvert Cliffs</p> <p>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.</p> <p>c) Prepare a trip report (as an input to NRC Audit Report) to summarize the information reviewed, results of the audit, and meeting discussions.</p> <p>STANDARD: Complete evaluation as defined in Task. Submit Trip Report within 2 weeks of site review.</p>	<p>*2 weeks after the trip</p>	<p>Trip Report</p>
<p>8b. REQUIREMENT: As needed and requested by the staff, provide technical support to the staff during related ACRS meetings and hearing proceedings.</p> <p>STANDARD: Ensure presentation materials are reviewed and approved by NRC staff.</p>	<p>TBD</p>	<p>Prepare presentation materials. Attend meetings, if requested.</p>

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

4.0 TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

As specified in the basic task ordering agreement, 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:

- Mechanical engineers or fluid systems engineer(s) or analysts with extensive experience in reviewing control room habitability design, control room area ventilation design, spent fuel pool area ventilation, turbine area ventilation systems, and Engineered Safety Features (ESF) systems.

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 (principal investigators, technical staff,

employees, consultants, specialists or subcontractors) 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 task order is subject to the NRC technical monitor's (TM's) approval and the resume for each shall be provided. 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 an interim progress report bi-weekly to include staff hours expended and percent completed for each task under this task order. The report shall be sent electronically by e-mail to the NRC PM and TM.

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 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-4012; Task Order No.:7; the licensee: UniStar; and, the site: Calvert Cliffs.

- A. At the completion of Task 4, submit a 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.
- B. At the completion of Task 5, submit a TER (see Attachment 1) that contains a summary of the review results and the updated report completed under Task 4 incorporating the findings from the resolution of the RAIs. Include a separate list of the remaining open items and the basis for such determination.
- C. At the completion of Task 8a, submit a trip report, as an input to NRC audit report, that contains a summary of documents audited, the audit results of the design reports and design calculations, a summary of meeting discussions 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 4.

- D. At the completion of Task 6, submit a TER (see Attachment 1) that contains a safety evaluation report with open items resolved and update of the TER developed under Task 5.

6.0 MEETINGS AND TRAVEL

The following travel assumptions should be considered in planning the work effort. It is likely that a smaller group than the entire review team will be necessary to accomplish some activities; the actual travel contingent will be determined by the NRC TM after discussion with the contractor PM. Travel in excess of the total number of person-trips must be approved by the NRC TAPM; travel within the work scope limits will be approved by the NRC TM.

- One, 3-person, 2-day working meeting to kickoff project and contractor orientation (Task 2)
- (If required) one, 2-person, 3-day trip to the applicant's facility (Task 8a)
- One, 2-person, 2-day working meeting at NRC headquarters to review deliverables (task 8b)
- Two, 2-person, 2-day meetings, if needed, for hearing or ACRS meeting. (Task 8b)

At the discretion of the NRC TM, quarterly progress meetings may be conducted at the contractor's office or 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 Design Certification Document (DCD).
- c) CD-ROM containing Technical Reports which support the DCD.

8.0 LEVEL OF EFFORT

The estimated level of effort in professional staff hours apportioned among the subtasks and by labor category for the R-COL is as follows:

Task(s)	Labor Category	Level of Effort FY 2008 (hrs)	Level of Effort FY 2009 (hrs)	Level of Effort FY 2010 (hrs)
1	Fluid systems engineers / analysts	[REDACTED]	0	0
2	Fluid systems engineers / analysts	[REDACTED]	0	0
3	Fluid systems engineers / analysts	[REDACTED]	0	0
4	Fluid systems engineers / analysts	[REDACTED]	0	0
5	Fluid systems engineers / analysts	[REDACTED]	0	0

Task(s)	Labor Category	Level of Effort FY 2008 (hrs)	Level of Effort FY 2009 (hrs)	Level of Effort FY 2010 (hrs)
6	Fluid systems engineers / analysts	0	[REDACTED]	0
7	Fluid systems engineers / analysts	0	0	[REDACTED]
8	Fluid systems engineers / analysts	[REDACTED]	[REDACTED]	[REDACTED]
9	Project Manager	[REDACTED]	[REDACTED]	[REDACTED]
Total	R-COL: [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

9.0 PERIOD OF PERFORMANCE

The projected period of performance is 30 months from authorization of work.

10.0 OTHER APPLICABLE INFORMATION

License Fee Recovery

All work under this task order is fee-recoverable under 10 CFR Part 170 and shall be charged to the appropriate TAC number(s).

Assumptions and Understandings:

- The level of effort for Tasks 3 and 4 is based on the assumption that the contractor is familiar with the review procedures of the SRP Sections.
- The level of effort for Task 5 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 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 for the visit to the applicant's site, if necessary, is based on one, two-person, three-day trip (including travel time) plus four days to prepare for the trip and to write the trip reports.
- The level of effort in Task 8b is based on requiring three, two-day trips 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 technical reviewer(s) for both the DCD application and the COLA will be the same for the respective sections.

Attachments:

1. Outline, Format, and sample content for the TER (draft SER) Input. Sample Generic Safety Evaluation Report for ABWR COL, chapter 6

2: Acceptance Criteria Checklist. From NRO Office Instruction, NRO-REG-100, "Acceptance Review Process for Design Certification and Combined License Applications", [ML071980027], Attachment C, Table 1