

ORDER FOR SUPPLIES OR SERVICES

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

BPA NO.

1. DATE OF ORDER SEP 04 2008		2. CONTRACT NO. (if any) NRC-42-07-482		6. SHIP TO:	
3. ORDER NO. 0029		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 301-415-6310 Mail Stop T-7-I-2 Washington, DC 20555		4. REQUISITION/REFERENCE NO. 42-07-482T029 NRO 08 263		b. STREET ADDRESS Attn: Robert Fretz 301-415-1980 Mail Stop: T6-C34	
7. TO:		c. CITY Washington		d. STATE DC	e. ZIP CODE 20555
a. NAME OF CONTRACTOR ENERGY RESEARCH INC		f. SHIP VIA		8. TYPE OF ORDER	
b. COMPANY NAME		<input type="checkbox"/> a. PURCHASE		<input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS 6167 EXECUTIVE BLVD		d. CITY ROCKVILLE		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 MD		f. ZIP CODE 208523901		Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
9. ACCOUNTING AND APPROPRIATION DATA 825-15-171-111; Q4013; 252A; 31X0200 \$75,000 Contractor DUNS: 621211259		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"/> g. SERVICE-DISABLED VETERAN-OWNED	
<input type="checkbox"/> d. WOMEN-OWNED		<input type="checkbox"/> e. HUBZone		<input type="checkbox"/> f. EMERGING SMALL BUSINESS	
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 NET 30	

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. 29 under Contract No. NRC-42-07-482 Title: "Victoria County SCOLA - Review SRP Chapters 2.4.13, 11.1 - 11.5 and 14.3.7" Period of Performance: 09/03/2008-03/02/2011 Estimated Reimbursable Cost: \$207,872.80 Fixed Fee: \$10,393.64 Total Cost Plus Fixed Fee: \$218,266.44 Funding in the amount of \$75,000 is being provided. See attached pages for a description of Task Order 29					

18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont pages)	
21. MAIL INVOICE TO:							17(i). GRAND TOTAL
a. NAME U.S. Nuclear Regulatory Commission Payment Team, Mail Stop T-9-H-4							
b. STREET ADDRESS (or P.O. Box) Attn: NRC-42-07-482, Task Order 29							
c. CITY Washington		d. STATE DC		e. ZIP CODE 20555		\$218,266.44	
22. UNITED STATES OF AMERICA BY (Signature) <i>Kala Shankar</i>				23. NAME (Typed) Kala Shankar Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER			

In accordance with Section G.4, Task Order Procedures, of Contract No. NRC-42-07-482, this definitizes Task Order No. 29. The effort shall be performed in accordance with the attached Statement of Work.

Task Order No. 29 shall be in effect from September 3, 2008 through March 2, 2011, with a cost ceiling of \$218,266.44. The amount of \$207,872.80 represents the estimated reimbursable costs, and the amount of \$10,393.64 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$75,000, of which \$71,429 represents the estimated reimbursable costs, and the amount of \$3,571 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: Karen Chapman
Project Officer
301-415-3653

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

Acceptance of Task Order No. 29 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

09/03/08
DATE

TASK ORDER STATEMENT OF WORK

JCN/Contract No. Q4013	Contractor ERI, Inc.	Task Order No. 29 NRC-42-07-482 - 29
Applicant Exelon	Design/Site ESBWR/Victoria County Station	Docket No. Project No. 761
Title/Description Review SRP Chapters 2.4.13, 11.1 – 11.5, and 14.3.7 for the Victoria (ESBWR) SCOL Application		
TAC No. RX0415	B&R Number 825-15-171-111	SRP Section(s) 2.4.13, 11.1 – 11.5, and 14.3.7
NRC Task Order Project Officer (PO)		
Karen Chapman	(301) 415-3653	karen.chapman@nrc.gov
NRC Technical Monitor (TM)		
Edward Roach	(301) 415-1973	edward.roach@nrc.gov
Stephen Williams (upon certification)	(301) 415-6498	stephen.williams@nrc.gov
DCIP/CHPB		

1.0 BACKGROUND

On or about September 1, 2008, Exelon plans to submit an application for a combined license (COL) for ESBWR/Victoria County. The purpose of this Task Order is to obtain the necessary technical assistance to support the NRC staff in determining whether or not the subject COL application meets appropriate regulatory requirements.

Combined licenses (COL) applications are submitted pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 52, "Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants." The U.S. Nuclear Regulatory Commission (NRC) reviews these requests based on information furnished by ESP, DC and COL applicants pursuant to 10 CFR 52.79, "Contents of Applications Technical Information."

The NRC staff has prepared NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," to provide guidance to the staff in performing safety reviews of COL applications and 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.

The NRC staff has also prepared NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants," to provide guidance to the staff performing environmental reviews of applications relating 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) or an Environmental Safety Evaluation Report (ESER).

This task order involves the review of the liquid, gaseous, and solid waste management systems described in the application. These systems deal with the treatment, storage, handling and disposal of radioactive waste solids, liquids and gases. The review of each waste management system includes the design, design objectives, design criteria, methods of treatment, expected

releases, and methods and principal parameters used in calculating effluent source terms and releases of radioactive materials. The review includes system piping and instrumentation diagrams (P&IDs) and process flow diagrams showing methods of operation and factors that influence waste treatment (e.g., system interfaces and potential bypass routes to non-radioactive systems). In addition, the review entails estimating gaseous and liquid effluent releases and calculating offsite doses to the maximally exposed individual and surrounding populations in order to comply with 10 CFR 20.1301 and 1302, and Appendix I to 10 CFR 50. Finally, the process and effluent radiological monitoring and sampling systems (RMS) used to monitor liquid and gaseous process streams and effluents from the liquid waste management system (LWMS), gaseous waste management system (GWMS), and solid waste management system (SWMS), will be reviewed.

Additional background information may be found in the basic task ordering agreement.

2.0 OBJECTIVE

The objective of this task order is to obtain technical expertise from the contractor to assist the staff in determining whether the application meets appropriate regulatory requirements.

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 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 format. The TER format is provided in Attachment 1 to this Task Order Statement of Work (SOW).

The initial task, which is optional, 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 evaluating the technical sufficiency of the application to identify major deficiencies that might impact the review process or affect the planned resources and schedule. This review will be conducted consistent 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 contractor will review the application on behalf of and under the purview of the Construction Health Physics Branch (CHPB). The contractor has primary review responsibilities for the following SRP sections:

- 2.4.13 Accidental Release of Radioactive Liquid Effluents
Note: CHPB has secondary review responsibilities
- 11.1 Radioactive Waste Source Terms – Design Basis and Normal Operation and AOOs
Note: CHPB has secondary review responsibilities for normal operations and AOOs
- 11.2 Radioactive Liquid Waste Management Systems
- 11.3 Radioactive Gaseous Waste Management Systems
- 11.4 Radioactive Solid Waste Management Systems
- 11.5 Radioactive Waste Monitoring and Sampling

- 14.3.7 Plant Systems – Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)
Note: CHPB has secondary review responsibilities
- 14.3.8 Radiation Protection – Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

In addition, the contractor will review applicable CHPB 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 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 CHPB primary review responsibilities: SRP 11.2 – 11.5 and associated references. Become familiar with CHPB secondary review responsibilities: SRP 1.8, 1.9, 2.3.5, 2.4.12, 2.4.13, 7.5, 9.2, 9.3, 9.4, 10.3, 10.4, 11.1, 13.1, 13.3, 13.4, 12.3-12.4, 14.2, 14.3.7, 16, 17, and associated references. STANDARD: Written confirmation that familiarization is complete. 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>* 30 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, and the scope of review of technical areas where CHPB has secondary review responsibilities. STANDARD: Attendance by individuals designated by NRC.</p>	<p>* 10 days after authorization of work</p>	<p>N/A</p>
<p>3. REQUIREMENT (Optional): Review the application to 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. 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>

Tasks/Standards	Scheduled Completion	Deliverables
<p>4. REQUIREMENT: Review the COL application Sections 11.2 – 11.5 and, as needed, supporting COLA Sections 1.8, 1.9, 2.3.5, 2.4.12, 2.4.13, 7.5, 9.2, 9.3, 9.4, 10.3, 10.4, 11.1, 13.1, 13.3, 13.4, 12.3-12.4, 14.2, 14.3.7, 16, and 17 to determine the adequacy of the application 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). The contractor will periodically meet with the TM to discuss DCD and RCOL issues and progress to facilitate this SCOL review. The TM will communicate RAIs and RCOL Open Items related to this review.</p> <p>NOTE: The contractor's review will likely focus on site-specific information provided by applicant when the SCOL is standardized with the RCOL for this reactor design.</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. Typically, no more than two (2) rounds of comment incorporation are acceptable.</p>	<p>* 90 days after NRC official review is authorized</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>

Tasks/Standards	Scheduled Completion	Deliverables
<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>
<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 application as described in the COL for Victoria County.</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: <i>(If applicable)</i> Prepare for and travel to the applicant's site and participate in the environmental site audit to:</p> <p>a) Identify and resolve any inconsistencies between the applicant's ER and FSAR with regard to the offsite dose resulting from effluents (ER section 4.5, 5.4, and FSAR Section 11)</p> <p>STANDARD: Submit a Trip Report within 2 weeks of site audit.</p>	<p>*2 weeks after the trip</p>	<p>Trip report</p>
<p>8c. 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) 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 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:

- Formal education, training, and experience in nuclear engineering, applied health physics, nuclear licensing, radiochemistry, or radiological engineering, and at least seven years direct nuclear power plant related experience.
- Knowledge of the design and performance characteristics which constitute an effective liquid and gaseous radioactive waste management system for radioactive materials produced during normal operation and anticipated operational occurrences. Including knowledge of those design features that are necessary for collecting, handling, and treatment of system process streams, and releasing and disposing of liquid and gaseous effluents, including but not limited to piping, pumps, valves, filters, demineralizers, mobile equipment connected to permanently installed systems, and any additional equipment that may be necessary to process and treat liquid wastes and route them to the point of discharge. Ability to assess types and characteristics of filtration, ion-exchange resins, and adsorbent media to treat process and effluent streams, including expected removal efficiencies, decontamination factors, and holdup or decay times.
- Ability to use, as applicable, PWR-GALE and BWR-GALE code to calculate effluent source terms and releases of radioactive materials in liquid and gaseous effluents, with given parameters and calculation techniques provided in NUREG-0016 or NUREG-0017 and Regulatory Guide 1.112, and ANSI/ANS 18.1-1999, including setting up analyses and data input, running the code, and providing associated reports describing results and interpretation of results. Ability to review alternate methods, other than the GALE code or ANSI/ANS 18.1-1999, proposed by ESP/DCD/COL applicants in developing liquid and gaseous radioactive effluent source terms and assess whether the methods and results are acceptable and consistent with NRC guidance.
- Knowledge of the design and performance characteristics which constitute an effective gaseous radioactive waste management system for processing radioactive gases collected in offgas systems (with charcoal delay beds) or waste gas storage and decay tanks. In addition, knowledge of how gaseous radioactive waste from the following sources is managed: condenser air removal system, steam generator blowdown flash tank (if applicable), and containment purge exhausts for PWRs; hydrogen and oxygen recombiners and instrumentation to control hydrogen and oxygen levels; gland seal exhaust and mechanical vacuum pump operation exhaust for BWRs; and building ventilation exhausts for both PWRs and BWRs. Ability to assess types and characteristics of filtration and adsorbent media to treat gaseous process and effluent streams, including expected removal efficiencies, decontamination factors, and holdup or decay times.

- Knowledge of how mobile equipment connected to permanently installed systems is used to reduce releases of radioactive materials in effluents from the sources described above. In particular, ability to read P&IDs and process flow diagrams showing methods of operation and factors that influence waste treatment (e.g. system interfaces and potential bypass routes for non-radioactive systems) and engineering methods applied to avoid uncontrolled and unmonitored releases to the environment.
- Ability to perform dose calculations associated with liquid and gaseous effluents using NUREG/CR-4653 (GASPAR II code) and NUREG/CR-4013 (LADTAP II), including setting up analyses and data input, running code, and providing associated reports describing results, interpretation of results, and assessment of compliance with NRC regulations and guidance, including Regulatory Guides 1.109, 1.111, and 1.113. Ability to review alternate methods proposed by ESP/DCD/COL applicants in assessing doses from liquid and gaseous radioactive effluents and assess whether the methods and dose results are acceptable and consistent with NRC guidance.
- Knowledge of the design and performance characteristics of solid waste management systems (SWMS) designed for managing and processing liquid, wet, and dry solid radioactive wastes. Knowledge of those design features that are necessary for collecting, handling, processing, and storing wastes, such as piping, pumps, valves, mobile equipment connected to permanently installed systems, piping and instrumentation diagrams, process and effluent radiation monitoring and control instrumentation, process flow diagrams and any additional equipment that may be necessary to process and treat liquid, dry, and wet wastes and route them to the point of discharge from the SWMS or to prepare them for shipment to authorized offsite disposal sites or licensed radioactive waste processors.
- Ability to assess whether DCD/COL applicants have fulfilled the requirements of Section II.D of Appendix I to 10 CFR Part 50 with respect to meeting the ALARA criterion. The assessment considers the potential effectiveness of augmenting the proposed LWMS, GWMS, and SWMS using items of reasonably demonstrated technology and has determined that further waste treatment will not effect reductions in cumulative population doses reasonably expected within a 50-mile radius. Ability to review alternate methods, other than Regulatory Guide 1.110, proposed by DCD/COL applicants in assessing whether the methods and cost-benefit analysis results are acceptable and consistent with NRC guidance.
- Knowledge of the process and effluent radiological monitoring and sampling systems (RMS) used to monitor liquid and gaseous process streams and effluents from the liquid waste management system (LWMS), gaseous waste management system (GWMS), and solid waste management system (SWMS). The RMS includes subsystems used to collect process and effluent samples during normal operation and anticipated operational occurrences and under post-accident conditions. Capability to assess the design objectives and criteria for the RMS, including the interface with skid-mounted radiation monitoring equipment connected to permanently installed systems. The assessment addresses (1) process and effluent streams to be monitored by radiation detection instrumentation or sampled for separate analyses, (2) purpose of each monitoring or sampling function, and (3) parameters to characterize, through monitoring instrumentation or sampling and analysis, radionuclide distributions and concentrations in sampled process and effluent streams (e.g., total gross beta-gamma or alpha activity, radionuclide-specific concentrations, isotopic, total radioactivity level, or groupings of

radionuclides). Assess compliance with NRC regulations under 10 CFR Parts 20, 50.34a, and 50.36a; General Design Criteria 60, 63, and 64 of Appendix A to Part 50; related requirements of Part 50.34(f); requirements of Appendix I to Part 50; and 10 CFR Part 20 as it relates to allowable dose limits and effluent concentrations in unrestricted areas. Assess compliance with NRC guidance given in NUREG-1301, NUREG-1302, NUREG-0133, NUREG-0543, SRP Chapters 7.5, 11.5 and 16 of NUREG-0800, and Regulatory Guides 1.21, 1.33, 1.97, and 4.15; and ANSI/HPS N13.1-1999 and ANSI N42.18-2004. Ability to review alternate instrumentation equipment and monitoring methods proposed by DCD/COL applicants and assess whether equipment and methods are acceptable and consistent with NRC guidance.

- Demonstrate a working knowledge of NRC regulations and guidance, as they relate to characterizing, monitoring, controlling, and reporting of radioactive materials present in liquid and gaseous produced during normal plant operations and anticipated operational occurrences. Demonstrate a working knowledge of NRC regulations under 10 CFR Parts 52 (Subparts A, B, and C); 10 CFR Parts 50.34a and 50.36a; General Design Criteria of Appendix A to Part 50; related requirements of Part 50.34(f); requirements of Appendix I to Part 50; 10 CFR Part 20 as it relates to allowable dose limits and effluent concentrations in unrestricted areas; and 10 CFR Parts 20 and 61 as they relate to the characterization and shipment of low-level radioactive wastes for disposal or processing by waste brokers. Demonstrate a working knowledge or understanding of NRC regulations and guidance described in SRP Sections 11.1 to 11.5 (as primary responsibilities, NUREG-0800, March 2007), and Regulatory Guide 1.206.
- Ability to assess the scope, technical elements, and regulatory compliance of operational programs, including the ODCM, RETS/SREC, REMP, and PCP, submitted either as complete operational programs, by reference to NRC-approved templates, or via endorsement of existing operational programs at a site with collocated operating plants. Assess whether these operational programs are consistent with surveillance requirements of plant's TS, administrative procedures, operational procedures, quality assurance and quality control program, radiological controls and monitoring program, and annual reporting requirements to the NRC. Assess compliance with NRC guidance given in NUREG-1301; NUREG-1302; NUREG-0133; NUREG-0543; SRP Chapters 11.4, 11.5, and 16 of NUREG-0800; and Regulatory Guides 1.21, 1.33, 1.97, and 4.15.

The contractor shall provide a project manager (PM) or environmental project team leader (PTL) 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 specialization to work in the proposed area. The use of particular personnel on this task order is subject to the NRC 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 a bi-weekly progress report summarizing accomplishments, expenditures, contractor staff hours expended, percent completed for each task under this task order, and any problems encountered by the contractor. The report shall be sent via e-mail to the NRC TM, TAPM and CO.

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

Technical reporting requirements

Unless otherwise specified above, the contractor shall provide all deliverables as draft products. The NRC TM will review all draft deliverables (and coordinate any internal NRC staff review, if needed) and provide comments back to the contractor. The contractor shall revise the draft deliverable based on the comments provided by the TM, and then deliver the final version of the deliverable. When mutually agreed upon between the contractor and the TM, the contractor may submit preliminary or partial drafts to help gauge the contractor's understanding of the particular work requirement.

The contractor shall provide the following deliverables in hard copy and electronic formats. The electronic format shall be provided in 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.: Q4013; Task Order No.:29; Technical Assignment Control No. (TAC): RX0415; the applicant: Exelon; and, the site: Victoria County Station.

- A. At completion of Task 3, 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 deficiencies from completion of Table 1 of Attachment 2 to this Task Order.
- B. At the completion of Task 4, submit a TER that contains, for each Sub-section of the SER, 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.
- C. 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.

- D. At the completion of Task 8a, submit a trip report, as an input to NRC audit report, containing 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.
- E. 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)
- Up to 10, 2-person, half-day working meetings to review and update contractor on RCOL and DCD progress, status, RAIs and open items.
- (If required) one, 2-person, 3-day trip to the applicant's facility (Task 8a)
- One, 1-person, 2-day meetings to participate in the Environmental Site Audit (task 8b)
- One, 2-person, 2-day working meeting at NRC headquarters to review deliverables (task 8c)
- 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 SCOL Sections and the relevant Appendices from the SCOL application.
- b) CD-ROM containing the Final Safety Evaluation Report of the DCD.
- c) CD-ROM containing RCOL Sections and the relevant Appendices from the RCOL application.

8.0 LEVEL OF EFFORT

The estimated level of effort in professional staff hours apportioned among the subtasks and by labor category for the SCOL 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)	Level of Effort FY 2011 (hours)
1	Health Physicist/ engineers / analysts	48	48	0	0
2	Health Physicist/ engineers / analysts	20	0	0	0
3	Health Physicist/ engineers / analysts	0	68	0	0
4	Health Physicist/ engineers / analysts	0	204	0	0
5	Health Physicist/ engineers / analysts	0	0	126	0
6	Health Physicist/ engineers / analysts	0	0	180	0
7	Health Physicist/ engineers / analysts	0	0	48	0
8	Health Physicist/ engineers / analysts	0	148	48	48
All	Project Manager	10	60	24	10
Total		78	528	426	58

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 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 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 (about 125 hours).

- 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 (about 80 hours).
- 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.

Attachments:

1. Outline, format, and sample content for the TER (draft SER) Input. Sample Generic Safety Evaluation Report for PWR/BWR COL, chapter 11
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
3. Detailed Review Criteria and Regulatory Guidance for SRP Sections 11.1 – 11.5 for use with COLA sections which are not incorporated by reference from the RCOLA.