

**ORDER FOR SUPPLIES OR SERVICES**

PAGE OF PAGES

1 | 5

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

BPA NO.

1. DATE OF ORDER	2. CONTRACT NO. (If any) <b>NRC-03-09-070</b>	6. SHIP TO:	
3. ORDER NO. <b>TO 007</b>	MODIFICATION NO.	a. NAME OF CONSIGNEE <b>U.S. Nuclear Regulatory Commission ATTN: Karvn Hannum, 301-415-2290</b>	
4. REQUISITION/REFERENCE NO. <b>NRR-10-300</b>		b. STREET ADDRESS <b>Mail Stop OWEN 11F1</b>	

5. ISSUING OFFICE (Address correspondence to) <b>U.S. Nuclear Regulatory Commission Division of Contracts Attn: Valerie Whipple Mail Stop: TWB-01-B10M Washington, DC 20555</b>		c. CITY <b>Washington</b>	d. STATE <b>DC</b>	e. ZIP CODE <b>20555</b>
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7. TO:		f. SHIP VIA		
a. NAME OF CONTRACTOR <b>SOUTHWEST RESEARCH INSTITUTE INC</b>		8. TYPE OF ORDER		
b. COMPANY NAME		<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY		

c. STREET ADDRESS <b>6220 CULEBRA RD</b>		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.		
d. CITY <b>SAN ANTONIO</b>	e. STATE <b>TX</b>	f. ZIP CODE <b>782385100</b>		
9. ACCOUNTING AND APPROPRIATION DATA <b>BOC: 252A JC: J-4382 APPN: 31X0200.020 \$29.000 FFS: NRR-10-300 B &amp; R: 020-15-112-130</b>		10. REQUISITIONING OFFICE <b>NMS</b>  <b>NRR</b>		

11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT Destination	
<input type="checkbox"/> a. SMALL	<input checked="" type="checkbox"/> b. OTHER THAN SMALL	<input type="checkbox"/> c. DISADVANTAGED	<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) <b>Award Date - 10/31/2011</b>		16. DISCOUNT TERMS <b>NET 30</b>	
a. INSPECTION <b>Rockville, MD 20852</b>	b. ACCEPTANCE <b>Rockville, MD 20852</b>						

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)
	<p>Contractor shall provide services in accordance with the attached Statement of Work entitled "Technical Assistance for Corrosion/Materials Review of License Renewal Applications. Columbia Generating Station, U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation.</p> <p>The total estimated (ceiling) is \$115,415 which may increase up to \$124,064 should the Government exercise optional work. The obligated amount is \$29,000. Any work undertaken by the Contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk.</p> <p>NRC PROJECT OFFICER: Karvn Hannum 301-415-2290</p> <p>PERIOD OF PERFORMANCE: Date of Award - 10/31/2011. w/option to extend through 11/30/2011.</p> <p>DUNS: 007936842</p>					
					<b>CURRENT CEILING: \$115.415</b>	
					<b>TOTAL POSSIBLE CEILING: \$124.064</b>	

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 <b>U.S. Nuclear Regulatory Commission NRCPayments@nrc.gov</b>						
	b. STREET ADDRESS (or P.O. Box) <b>Attn: Fiscal Services Branch - D2770, 7301 W. Mansfield Avenue</b>						
c. CITY <b>Denver</b>		d. STATE <b>CO</b>	e. ZIP CODE <b>80235-2230</b>				

22. UNITED STATES OF AMERICA BY (Signature)	23. NAME (Typed) <b>Valerie M. Whipple Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER</b>
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AUTHORIZED FOR LOCAL REPRODUCTION PREVIOUS EDITION NOT USABLE  
**TEMPLATE - ADM001**

**SUNSI REVIEW COMPLETE**

OPTIONAL FORM 347 (REV. 3/2005) PRESCRIBED BY GSA/FAR 48 CFR 53.213(e)

MAY 24 2010

**ADM002**

Please indicate your acceptance of this order by having an official who is authorized to bind your organization, execute this document in the space provided below.

ACCEPTED:

Signature:  \_\_\_\_\_

Name: R.B. Kalmbach

Title: Executive Director, Contracts

Date: 5/21/2010

5/21/2010

List of Attachments

1. Statement of Work

**A. SEAT BELTS**

Contractors, subcontractors, and grantees, are encouraged to adopt and enforce on-the-job seat belt policies and program for their employees when operating company-owned, rented, or personally owned vehicles.

**B. CONSIDERATION AND OBLIGATION --COST PLUS FIXED FEE (JUN 1988)**

- (a) The total estimated cost to the Government for full performance of this contract is **\$115,415**, of which the sum of **\$** represents the estimated reimbursable costs, and of which **\$** represents the fixed fee.

In the event that the Government exercises optional work pursuant to FAR Clause 52.217-8 and/or FAR Clause 52.217-9 incorporated in this task order, the total estimated amount of this order will increase as follows:

Optional Task F:       **\$8,649**

- (b) There shall be no adjustment in the amount of the Contractor's fixed fee by reason of differences between any estimate of cost for performance of the work under this contract and the actual cost for performance of that work.
- (c) The amount presently obligated with respect to this order is **\$29,000**, of which **\$** represents the estimated reimbursable costs, and of which **\$** represents the fixed fee. The Contractor shall not be obligated to incur costs above this ceiling/obligated amount unless and until the Contracting Officer shall increase the amount obligated. Any work undertaken by the Contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk.

**C. PERIOD OF PERFORMANCE**

The period of performance of this order (Tasks A, B and C) shall be **date of award – October 31, 2011**, with an option to extend the period of performance through **November 30, 2011** should the optional tasks be exercised.

**D. CLAUSES INCORPORATED IN FULL TEXT**

**FAR 52.217-7, Option for Increase Quantity—Separately Priced Line Item**

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within the period of performance of the task order. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

**FAR 52.217-9 Option to Extend the Term of the Contract. (Mar 2000)**

- (a) The Government may extend the term of this contract by written notice to the Contractor **within the period of performance of the task order**; provided that the Government gives the Contractor a preliminary written notice of its intent to extend **at least 15 days** before the contract expires. The preliminary notice does not commit the Government to an extension.
- (b) If the Government exercises this option, the extended contract shall be considered to include this option clause.
- (c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed **18.25 months**.

**E. WHISTLEBLOWER PROTECTION FOR NRC CONTRACTOR AND SUBCONTRACTOR EMPLOYEES (JULY 2006)**

(a) The U.S. Nuclear Regulatory Commission (NRC) contractor and its subcontractor are subject to the Whistleblower Employee Protection public law provisions as codified at 42 U.S.C. 5851. NRC contractor(s) and subcontractor(s) shall comply with the requirements of this Whistleblower Employee Protection law, and the implementing regulations of the NRC and the Department of Labor (DOL). See, for example, DOL Procedures on Handling Complaints at 29 C.F.R. Part 24 concerning the employer obligations, prohibited acts, DOL procedures and the requirement for prominent posting of notice of Employee Rights at Appendix A to Part 24.

(b) Under this Whistleblower Employee Protection law, as implemented by regulations, NRC contractor and subcontractor employees are protected from discharge, reprisal, threats, intimidation, coercion, blacklisting or other employment discrimination practices with respect to compensation, terms, conditions or privileges of their employment because the contractor or subcontractor employee(s) has provided notice to the employer, refused to engage in unlawful practices, assisted in proceedings or testified on activities concerning alleged violations of the Atomic Energy Act of 1954 (as amended) and the Energy Reorganization Act of 1974 (as amended).

(c) The contractor shall insert this or the substance of this clause in any subcontracts involving work performed under this contract.

**F. 2052.215-70 KEY PERSONNEL (JAN 1993)**

- (a) The following individuals are considered to be essential to the successful performance of the work hereunder:

<u>Name</u>	<u>Position</u>
	Project Manager
	Principal Investigator
	Principal Investigator

The contractor agrees that personnel may not be removed from the contract work or replaced without compliance with paragraphs (b) and (c) of this section.

- (b) If one or more of the key personnel, for whatever reason, becomes, or is expected to become, unavailable for work under this contract for a continuous period exceeding 30 work days, or is expected to devote substantially less effort to the work than indicated in the proposal or initially anticipated, the contractor shall immediately notify the contracting officer and shall, subject to the concurrence of the contracting officer, promptly replace the personnel with personnel of at least substantially equal ability and qualifications.
- (c) Each request for approval of substitutions must be in writing and contain a detailed explanation of the circumstances necessitating the proposed substitutions. The request must also contain a complete resume for the proposed substitute and other information requested or needed by the contracting officer to evaluate the proposed substitution. The contracting officer and the project officer shall evaluate the contractor's request and the contracting officer shall promptly notify the contractor of his or her decision in writing.
- (d) If the contracting officer determines that suitable and timely replacement of key personnel who have been reassigned, terminated, or have otherwise become unavailable for the contract work is not reasonably forthcoming, or that the resultant reduction of productive effort would be so substantial as to impair the successful completion of the contract or the service order, the contract may be terminated by the contracting officer for default or for the convenience of the Government, as appropriate. If the contracting officer finds the contractor at fault for the condition, the contract price or fixed fee may be equitably adjusted downward to compensate the Government for any resultant delay, loss, or damage.

## STATEMENT OF WORK

Project Title: Technical Assistance for Corrosion/Materials Review of License Renewal Applications, Columbia Generating Station, U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation

Job Code: J-4382

Task Area Kick-off Meeting, Audit Prep, Audit, Audit Report, Request for Additional Information, Review Applicants Responses, SER Input

Task Order # Seven (7) – Columbia

Budget & Reporting No: 020-15-112-130

NRC Issuing Office: Office of Nuclear Reactor Regulation

NRC Project Officer: Karyn Hannum, 301-415-2290, Karyn.Hannum@nrc.gov

NRC Technical Monitor: Albert Wong, 301-415-3081, Albert.Wong@nrc.gov

Fee Recoverable Yes

TAC Numbers Columbia Generating Station - Safety ME 3058

Performing Organization: Center for Nuclear Waste Regulatory Analyses (CNWRA hereafter Center)

### 1.0 Background

NRC's Office of Nuclear Reactor Regulation (NRR) is responsible for ensuring the public health and safety through licensing and inspection activities at all commercial nuclear power reactor facilities in the United States. Evaluation of License Renewal Applications (LRAs) is performed by the Division of License Renewal (DLR). DLR performs its work in accordance with the requirements of Title 10 of the *Code of Federal Regulations*, Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." In addition, DLR uses guidance provided in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants", Revision 1 (SRP-LR), dated September 2005 and in NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," Revision 1 also dated September 2005. The staff is seeking technical assistance in the review of LRAs in the area of Corrosion/Materials Engineering.

## 2.0 Objective

The objective of this contract is to provide technical support in the area of corrosion/materials engineering to the DLR project team in reviewing and evaluating the operating license renewal application of Columbia Generating Station (Columbia).

## 3.0 Scope of Work

The project team, composed of the Center and NRC staff, will audit and review aging management programs (AMPs), aging management reviews (AMRs), and time-limited aging analyses (TLAAs) submitted by the applicant. The project team will be led by a plant project manager (PM). The Center shall provide subject matter technical experts (SMEs) knowledgeable and experienced in the area of corrosion/materials engineering and science applicable to license renewal activities. The Center will provide technical expertise and services on a task basis for two (2) tasks (tasks B and C). The Center may provide technical expertise and services on this task order for three (3) optional tasks (tasks D, E and F) which include providing technical support for Advisory Committee on Reactor Safeguards (ACRS) meetings, technical support for Atomic Safety and Licensing Board Panel (ASLBP) hearings and peer review of safety evaluation reports if directed to do so by the Technical Monitor or Project Officer.

For its AMP review, the project team evaluates and audits the AMPs the applicant proposes to ensure that they are consistent with the GALL Report and reviews other selected plant-specific AMPs. For the assigned task scope of work the project team reviews the applicant's aging management activities and programs to determine whether these AMPs are adequate to manage the effects of aging on systems, structures, and components so their intended functions will be maintained consistent with the plant's current licensing basis (CLB) during the proposed period of extended operation.

For its AMR review, the project team evaluates the AMRs assigned in work packages called blue folders. The blue folder concept will be explained below.

For the TLAAs review, the project team evaluates the information provided by the applicant addressing the GALL Report recommendations and plant-specific TLAAs and determines if the information provided meets the requirements of 10 CFR 54.21.

An important attribute of this statement of work (SOW) is to provide flexibility in support. DLR will have multiple license renewal applications being reviewed concurrently and intends to use a blend of NRC personnel with Center support. Therefore, the contract support will need to be flexible and integrated with DLR's needs. DLR will provide a clear delegation of responsibility before the work begins for this project/plant to prevent any duplication of effort.

The following table provides examples of corrosion/materials engineering areas Center support staff will be expected to review and/or audit. Each of these topical areas is referred to as a "blue folder." The blue folder contains:

- Relevant SRP Sections
- AMRs that are not associated with a SRP section (Note E's)

- AMR line items (Non-note A - D)
- AMRs questioned by the plant project manager as to their consistency with the GALL Report
- Relevant AMPs
- FSAR Supplement (Associated with AMPS/TLAAs to be verified by Technical Reviewer)
- GALL items where there was no associated aging effect claimed by the applicant

TLAAs will also be included in a blue folder. Blue folders are work packages that are developed to focus the reviewers on the specific areas for review. Audits are performed for the technical areas where the applicant claims consistency with the GALL Report. In some cases, the Staff or Center may not need to audit a blue folder item because the items are not consistent with the GALL Report and will need to be technically reviewed. Items where there is a claim for consistency with GALL will be audited at the plant site. The Center will provide the audit write up, requests for additional information (RAIs) and safety evaluation report (SER) input for the audited items. Areas not audited will be reviewed, RAIs developed, and SER input provided.

The table below lists examples of blue folders in the corrosion/materials area for a typical license renewal application. The list may or may not reflect the final blue folder assignments. The actual list of blue folder assignments will be finalized later.

<b>Generic LRA Section</b>	<b>Description of Topical Areas</b>	<b>Expertise Needed</b>	<b>Audit(varies by plant)</b>
B.2.1.1	ASME Section XI Inservice Inspection, Subsections IWB, IWC, & IWD	Materials	Yes
B.2.1.2	Reactor Water Chemistry	Materials	Yes
B.2.1.4	Boric Acid Corrosion	Reactor Materials	Yes
B.2.1.5	Nickel-Alloy Penetration Nozzles Welded to the Upper Reactor Vessel Closure Heads of Pressurized Water Reactors	Reactor Materials	Yes
B.2.1.6	Flow Accelerated Corrosion	Materials	Yes
B.2.1.9	Open Cycle Cooling Water	Materials	Yes
B.2.1.10	Closed Cycle Cooling Water	Materials	Yes
B.2.1.17	Selective Leaching of Materials	Materials	Yes
B.2.1.18	Buried Piping and Tanks Inspection	Materials	Yes
B.2.1.20	External Surfaces Monitoring Program	Materials	Yes
B.2.1.29	Protective Coating Monitoring and Maintenance Program	Materials	Yes
B.2.2.1	Nickel Alloy Aging Management Program	Materials	No

Generic LRA Section	Description of Topical Areas	Expertise Needed	Audit(varies by plant)
B.3.1	Metal Fatigue of Reactor Coolant Pressure Boundary	Fatigue Specialist	Maybe
	Special topical areas (such as CASS, or Cast Austenitic Stainless Steel, as needed based on uniqueness of LRA)	Various	Maybe

If any work will be subcontracted or performed by consultants, the Center shall obtain the written approval of the subcontractor or consultant prior to initiation of the subcontract effort by the NRC Project Officer (PO) or Technical Monitor (TM). Conflict of interest considerations shall apply to any subcontracted effort.

**Task A. Project Kick-off Meeting**

The Center project staff shall attend a project initiation meeting with NRC staff within 10 working days of award of the agreement. This meeting will take place at the location of CNWRA, NRC Rockville, Maryland office, or via teleconference. Training will also occur while the NRC staff is at a CNWRA facility, at the NRC Rockville, Maryland office, or via teleconference. The purpose of the initial meeting is to discuss and finalize the draft project plan provided in response to the agreement request for proposal. The NRC PO, NRC TM, and CNWRA PM shall establish the elements of the final project plan, inclusive of deliverables, schedules, and staffing, and shall discuss expectations and objectives of the technical assistance, timeliness and quality of review products. The Center staff shall perform the review in accordance with the final project plan approved by the NRC TM. A copy of the final Project Plan shall be sent electronically (MS Project or similar format) to the NRC TM and PO for the task order.

Deliverable: Final Project Plan      Due: 10 working days from date of Project Kick-off meeting

**Task B. Audit Preparation, Auditing, and Audit Report**

The NRC project TM will provide information on the work assignments, e.g., the split of work between the Center SMEs and other NRC technical staff. The Center shall provide up to four (4) qualified professionals/SMEs to participate in an NRC-led project team audit, of up to twelve (12) days (six days per week for two weeks). The purpose of the team audit is to determine whether the applicant has sufficient on-site documentation, as indicated in its LRA, to demonstrate that the AMPs, which are determined by the applicant to be consistent with the GALL Report or previously approved staff positions, are actually consistent.

The Center shall perform the front end work associated with the preparation of audit and review. This work shall be performed at the Center's office immediately after the receipt of the task order for Columbia. The SME(s) will pre-write their assigned evaluation portion of the audit report, to the maximum extent possible. In addition, the Center shall ensure that each SME (1) review her/his portion of the assignments (blue folders) and (2) review and pre-write the

evaluation of her/his portion of the audit report, where possible. This will minimize the time needed at the auditee's site.

At the kick off meeting, the NRC will provide a sample of an audit report to the Center to aid in the pre-write of the audit report. The Center shall ensure that each SME prepares his/her questions after reviewing the program basis documents for discussion with the applicant during the audit. The Center shall document the results of the SMEs audit and review activities in an audit report in accordance with the example format provided. At or before the kickoff meeting and at the request of the Center, the NRC will provide a copy of the NRC training course materials on PWR and BWR reactor technology for the SMEs review.

The audit reports shall contain the LRA-specific information, extracted from the LRA, which are related to the audit. The audit report template will aid the SMEs in the pre-write of her/his assigned evaluation portion of the audit report. The TM will provide a current copy of the writing guidelines and a recently-issued audit report. The Center staff shall prepare the draft audit report in accordance with the writing guidance provided. The Center shall provide draft RAI's and initial audit report input from the audit before the on-site audit is completed. The draft audit report shall be delivered to the TM no later than ten (10) working days after the completion of the on-site visit.

The Center shall provide qualified professional technical staff/SMEs to prepare and review the audit report. The Center shall ensure the report is technically correct and complete. The Center shall incorporate comments from the peer review, comments from the NRC staff, and responses to the RAIs into the final audit report. The Center shall also provide technical writing services to prepare the final audit report.

The Center may be requested to support specific TLAA reviews and prepare portions of the draft TLAA sections of the audit report. The deliverables for this task are similar to the AMPs and AMR deliverables.

Deliverables:

1. Draft RAI's from the audit.
2. Draft AMP/AMR/TLAAs audit report sections

The draft RAI's from the audit shall be provided to the TM before the on-site audit is completed. The draft AMP/AMR/TLAAs section of the audit report shall be delivered to the TM no later than ten (10) working days after the completion of the first onsite visit. The Center shall revise the draft sections to reflect the NRC staff comments and shall deliver the final section of the audit report no later than five (5) working days after receipt of the NRC's comments on the draft sections.

**Task C. Request for Additional Information, Review Applicant's Responses, and SER Input (with Open items and Final)**

The Center shall provide qualified professionals/SME to prepare formal requests for additional information (RAI), when determined appropriate, to obtain additional information to continue with the LRA safety review. The RAI shall cite the technical and regulatory basis for requesting the information. The Center shall also provide qualified professionals/SMEs to review applicant's

responses to the RAI and to determine whether the applicant's responses are acceptable. The Center shall coordinate any exception to the GALL with the NRC technical staff through the TM.

Deliverables (if applicable):

- (1) draft RAIs;
- (2) technical edited final RAIs;
- (3) documentation of acceptability for incorporating into the draft audit report (unless the report has been completed before the RAI response is received); and
- (4) the SER input (with open items and final).

The Center shall deliver the draft RAIs to the TM no later than five (5) working days after assigned. The Center shall revise the draft RAIs to reflect the NRC staff comments and deliver the final RAIs no later than three (3) working days after receipt of NRC's comments on the draft RAIs. The Center shall deliver the documentation of acceptability to the NRC TM no later than seven (7) working days after receiving responses from the applicant. The Center shall incorporate responses to the RAIs into the final audit report. The Center shall develop the draft SER with open items in accordance with "Safety Evaluation Report Writing Guidelines and Samples" no later than fifteen (15) working days after the completion of the first onsite visit. The TM and/or plant PM will coordinate any internal NRC staff review of the draft SER with open items input and will prepare a set of NRC staff comments. The TM or plant PM will provide the comments to the Center and will discuss them with the Center. The Center shall revise the draft SER with open items to reflect the comments provided by the TM or plant PM and deliver the final SER input no later than five (5) working days after receipt of the comments.

Safety Evaluation Reports shall be written in accordance with NRC review guidance, and shall be consistent with NUREG-0650, "Publishing Documents in the NUREG Series," and NUREG-1379, "NRC Editorial Style Guide," and "Safety Evaluation Report (SER) Style Guide." SERs are to be delivered "camera ready" to NRC in Microsoft® Office Word 2003 or current NRC designated word processing software on a CD-ROM or an equivalent medium. Figures will be in .tif format. NRC will take the electronic files and produce the published report.

The Center shall develop and follow its quality control plan which outlines the procedures and system to be used for document version control, technical input tracking, change management, and technical and editorial reviews. The Center shall organize, track, and manage changes in a structured, systematic, and transparent manner, throughout the review and production of the draft and final SER.

**Task D.        ACRS Support - None**

**Task E.        ASLBP Support - None**

**Optional Task F.    Peer Review of SER (as directed by the TM)**

The Center shall provide up to 40 person-hours of peer review support for designated SER sections. The TM will provide specific sections to the Center for review in accordance with DLR guidance. The scope of work, resources, and completion time for each SER section will be agreed upon by the facilitator and the PO/TM prior to starting this activity.

The deliverable for this task is a marked (electronic and paper copy) version of the assigned SER section(s), with comments, as applicable and additional communication, if necessary, to clarify comments.

#### **4.0 Technical and Other Special Qualifications Required**

It is the responsibility of the Center to assign technical staff, employees, subcontractors, or specialists who have the required educational background, experience, or combination thereof to meet both the technical and regulatory objectives of the tasks specified in this SOW. The NRC will rely on representations made by the Center concerning the qualifications of the personnel assigned to this agreement, including assurance all information contained in the technical and cost proposal, including resumes, is accurate and truthful. The use of experienced personnel for the key positions on each task and blue folder under this project is essential to the success of the project.

The Center shall provide all necessary personnel, equipment, facilities and materials to accomplish the efforts placed under this contract. The use of particular personnel on this project is subject to the NRC TM's and PO's approval. This includes proposed changes to key personnel during the life of the agreement.

The Center team shall consist of SMEs in corrosion/materials engineering and science capable of conducting the SOW including the following disciplines: corrosion, materials engineering, power plant engineering or equivalent disciplines, as applicable to license renewal activities. For the purpose of bidding, assume that either three (3) or four (4) Center subject matter experts from the required disciplines will participate on the audit team per week with NRC and providing staff in other technical areas on an as-needed basis. It is expected the Center will review and comment on the sections of the SER provided by NRC staff. The NRC prepared sections will be incorporated in the camera-ready copies of the SER after the quality assurance and editing process of the sections are completed.

If any task will be subcontracted or performed by subcontractors or consultants, the Center shall obtain the NRC PO's written approval of the subcontractor or consultant prior to initiation of the subcontracted effort. Conflict of interest considerations shall apply to any subcontracted effort.

The subject matter experts will have demonstrated their expertise as documented in resumes, describing oral presentations at public meetings, professional conferences, management briefings, and providing expert testimony in hearings.

Compilation of information to conduct site audits and document findings in the draft SER may require extensive interviewing of stakeholders including power plant personnel and Federal, State, and local government officials. All stakeholder interactions shall be coordinated with the plant PM.

The Center shall furnish, for the Columbia LRA safety audit:

- Up to four (4) Subject Matter Experts per week in corrosion/materials engineering.

**The subject matter experts (SME) shall:**

- Provide technical expertise to complete the review of topical areas in blue folders.

- Generate RAIs, as necessary to complete the final SER
- Provide input into the audit report, SER with open items, and final SER

The Center shall assign the technical staff, employees, subcontractors, or specialists who have the required educations background, work experiences, or a combination thereof to meet both the technical and regulatory objectives of the work specified in this SOW.

The Center shall ensure that each SME reviews and becomes familiar with the plant-specific LRA with emphasis on AMPs, AMRs, and TLAs described in the blue folder. The Center shall ensure that each SME also reviews, for familiarization: (1) the audit report and (2) Sections 3 and 4 of a recently NRC issued SER (final SER or SER with open items), and the assigned blue folder. The NRC technical monitor (TM) will identify the specific audit reports and SERs for review.

### 5.0 Meetings and Travel

The audit at Columbia is scheduled around May, 2010 (tentatively). Three qualified experts (SMEs) in corrosion and materials engineering are requested for this task order, with an option for a fourth SME.

If the optional tasks are exercised, there will be additional travel of one day to the ACRS meeting in Rockville, MD and a one day trip to a location near the site for a public meeting.

Routine status meetings (weekly to monthly) by the NRC TM and facilitator should be conducted using electronic means of Tele/Video - conferences or other means to minimize travel costs. Progress meetings will be quarterly during any active phase of this project, at the discretion of the NRC. Each of these meetings is expected to last 1 day. The Center should plan to make available key personnel assigned to active tasks during the course of these meetings. Periodically, a program review meeting, which involves NRC and Center management, will be held at the Center office to review overall program objectives and project performance; program reviews are typically held annually. In addition, meetings at NRC Headquarters and technical information gathering trips may be necessary and will be identified by the TM. Specific meeting and travel requirements will be identified in the finalized project plan. Other travel will be confirmed with the NRC PO prior to commencement of the travel.

Meetings potentially requiring Contractor travel are summarized below.

<u>Topic</u>	<u>Location</u>	<u>Trips</u>	<u>Days</u>	<u>Contractor</u>
Basic Work: Site Visit	P.O. Box 968 Richland, WA 99352	up to 2	up to 12 days	3 or 4

### 6.0 Financial and Technical Status Reports

The Contractor shall submit periodic technical and financial reports in accordance with the

contract. The estimated staff effort should be recorded at the subtask level. The work accomplished and the degree of completeness should also be tracked by subtask. The reports are due within 15 calendar days after the end of the report period (i.e., each four week period). The NRC TM shall receive one copy of the periodic status report, and the NRC PO shall receive one copy. See the contract for further distribution requirements.

**APPENDIX A  
SCHEDULE AND DELIVERABLES**

<b>TASK</b>	<b>DELIVERABLE</b>	<b>SCHEDULE (working days)</b>
A	Final Project Plan	No more than ten (10) working days after Project Kick Off Meeting
B	Site Visit Trip Report	10 working days after Site Visit
B	Draft RAIs from the Audit	Prior to completion of on-site audit
B	Draft AMP/AMR/TLAAs audit report sections	No more than ten (10) working days after the completion of the first onsite visit
C	Draft RAIs	No more than five (5) working days after assigned
C	Technical Edited Final RAIs	No more than three (3) working days after receipt of NRC's comments
C	Documentation of Acceptability for incorporating into Draft Audit Report	no later than seven (7) working days after receipt of responses from the applicant
C	SER Input	no later than fifteen (15) working days after the completion of the first onsite visit
F	Marked version of the assigned SER section(s), with comments	30 days after receipt from NRC