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| IMPORTANT: Mark all packages and papers with contract and/or order numbers. | | | | | BPA NO. 6. SHIP TO: | | | | | | | | |
| 1. DATE OF ORDER 5/217/05 2. CONTRACT NO. (Many) NRC-03-03-038 | | | | | ; | 6. SHIP TO: | | | | | | | |
| 3. ORDER NO. T015 MODIFICATION NO. 4. REQUISITION/REFERENCE NO. NRR0303815 | | | | | U.S. Nuclear Regulatory Commission Ofc. of Nuclear Reactor Regulation | | | | | | | | |
| 5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission | | | | | | b. STREET ADDRESS Attn: Lawrence Ruth | | | | | | | |
| Division of Contracts Contract Management Branch 2 | | | | | | MailStop: OWF 10A1 | | | | | | | |
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| TITLE: REVIEW OF THE PALISADES LICENSE RENEWAL APPLICATION (LRA) - SCOPING AND SCREENING OF FIRE 2 AND BALANCE OF PLANT (BOP) AUXILIARY AND STEAM AND CONVERSION LESS HVAC AND CONTAINMENT SYSTEMS AND CO SUBJECT TO AGING MANAGEMENT REVIEW (AMR) AND A REV. FIRE PROTECTION SYSTEMS AND COMPONENTS AGING MANAGE PROGRAMS (AMPS) | | | | | G OF FIRE PROT STEAM AND POW TEMS AND COMPC AND A REVIEW | TER DNENTS OF | | | | | | | |
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| 22. UNITED STATES OF AMERICA / BY (Signature) | | | | | _ | | aron D. St atracting | | RING OFFICER | • | - ! | | |
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NRC-03-03-038 Task Order No. 015 Page 2 of 3

This confirms the verbal authorization that was provided to Information Systems Laboratories, Inc. (ISL) on 4/14/05, to begin work under Task Order No. 015, effective 4/14/05, with a temporary ceiling of \$50,000.00. This also provides confirmation of the verbal authorization that was given on 5/23/05, to continue work with an increase in the temporary ceiling by \$25,000.00, thereby, increasing the total temporary ceiling to \$75,000.00.

In accordance with Section G.4, <u>Task Order Procedures</u>, of contract number NRC-03-03-038, this definitizes Task Order No. 015. The effort shall be performed in accordance with the enclosed Statement of Work.

Task Order No. 015 shall be in effect from April 14, 2005, through June 30, 2006, with a cost ceiling of \$199,880.00. The amount of \$186,372.00 represents the estimated reimbursable costs, and the amount of \$13,508.00 represents the fixed fee.

Funds in the amount of \$100,000.00 (inclusive of the \$75,000.00 temporary ceiling) are being obligated under this task order. The obligated amount shall, at no time, exceed the task order ceiling. When and if the amount(s) paid and payable to the Contractor hereunder shall equal the obligated amount, the Contractor shall not be obligated to continue performance of the work unless and until the Contracting Officer shall increase the amount obligated with respect to this task order. Any work undertaken by the Contractor in excess of the obligated amount specified above is done so at the Contractor's sole risk.

The following individual is considered to be essential to the successful performance of work hereunder: The Contractor agrees that such personnel shall not be removed from the effort under the task order without compliance with Contract Clause H.1, Key Personnel.

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 Matters: | Lawrence Ruth | Contractual Matters: | Mona Selden |
|--------------------|-----------------|-----------------------------|---------------------|
| | Project Officer | | Contract Specialist |
| | (301) 415-1211 | • | (301) 415-7907 |
| | | | |

NRC-03-03-038 Task Order No. 015 Page 3 of 3

Acceptance of Task Order No. 015 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 below. You should retain the third copy for your records.

Enclosure: Statement of Work

Statement of Work Task Order No. 015 Under JCN J-3193

TITLE: Review of the Palisades License Renewal Application (LRA) - Scoping and Screening of Fire Protection and Balance of Plant (BOP - Auxiliary and Steam and Power Conversion less HVAC and Containment) Systems and Components Subject to Aging Management Review (AMR), and a Review of Fire Protection Systems and Components Aging Management Programs (AMPs)

520-15-112-130

| Darrino | 520-15-112-150 | |
|-------------------------|--------------------------------|----------------------------------|
| PROJECT MANAGER: | Lawrence C. Ruth | (301) 415-1211 |
| NRC TECHNICAL MONITORS: | Ronald M. Young James Downs | (301) 415-2852 (301) 415-3196 |

MC6433

TAC NUMBER: BACKGROUND

BER NO .

Pursuant to Section 50.51 of Title 10 of the <u>Code of Federal Regulations</u> (10 CFR 50.51), licenses to operate nuclear power plants (NPPs) are issued by the U.S. Nuclear Regulatory Commission (NRC) for a fixed period of time not to exceed 40 years. However, these licenses may be renewed by the NRC for a fixed period of time including a period not to exceed 20 years beyond expiration of the current operating license. The Commission's regulations in 10 CFR Part 54, (60 FR 22461) published on May 8, 1995, set forth the requirements for the renewal of operating licenses for NPPs.

Applicants for license renewal are required by 10 CFR 54 (The License Renewal Rule) to perform an integrated plant assessment (IPA). As specified in 10 CFR 54.4, the applicant must identify the systems, structures, and components (SSCs) that are within the scope of license renewal (scoping). In addition, in accordance with 10 CFR 54.21(a)(1), the applicant must determine which of the SSCs are subject to an AMR (screening). 10 CFR 54.21 (a)(2) requires the applicant to describe and justify the methods used to meet the requirements of 10 CFR 54.21(a)(1). Further, 10 CFR 54.21(a)(3) requires that, for each structure and component subject to an AMR, the applicant must demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis (CLB) for the period of extended operation. (Aging of SSCs at plants that have received a license extension are typically managed by a program referred to as an "aging management program" or AMP.) 10 CFR 54.21(b) requires that each application contain CLB changes, in the form of an amendment, during NRC review of the LRA. 10 CFR 54.21(c) requires the applicant to provide an evaluation of Time-limited Aging Analyses (TLAAs) including a list of TLAAs, as defined in 10 CFR 54.3 (special reviews for equipment which has aging assumptions integral to the design process). Lastly, 10 CFR 54.21(d) requires that each LRA include a Final Safety Analysis Report (FSAR) supplement containing a summary description of the intended AMPs for the period of extended operation.

OBJECTIVE

The objective of this task order is to obtain technical expertise from Information Systems Laboratories, Inc. (ISL) to assist the staff of the Plant Systems Branch (SPLB) in the Division of Systems, Safety, and Analysis (DSSA) to (1) review the applicant's screening and scoping of BOP and fire protection systems and components which are stated by the applicant to be within the scope of license renewal pursuant to 10 CFR 54, and (2) review the technical adequacy of the applicant's fire protection AMR and AMP review. Note that fire protection AMR and AMP review may not be required if the applicant's AMR and AMPs are consistent with the GALL Report (NUREG - 1801). For the purposes of this task order, the BOP systems include auxiliary systems and steam and power conversion systems less HVAC and containment systems.

This LRA review will be conducted such that the majority of safety evaluation report (SER) development will occur during a six month period. All contractor scoping and screening work is planned to be completed within a six month time window from task inception, subject to unavoidable delays in obtaining needed information. Resultant revisions to the contractor's work which may be requested by the NRC staff/Technical Monitor (TM) are not reflected in the work schedule. Note that some sub-task activities will extend beyond the six month point.

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

The use of experienced personnel for the key positions on this task is essential to the success of the task. At a minimum, key personnel will include the Task Leader and Principal Investigator performing the actual work. A specialist or specialists with expertise in technical and regulatory issues related to the fire protection SSCs commonly used at nuclear power stations (i.e., detection, suppression, water supply, and fire barriers), aging of fire protection components and maintenance of fire protection components, technical issues related to post fire safe-shutdown schemes, and experience with NRC Fire Protection Regulations and License Renewal Regulations; risk and reliability assessment; knowledge of plant systems and operational considerations important to risk, risk and reliability assessment; knowledge of plant specifications, will be required. Key personnel cannot be changed without the approval of the NRC TM, which will be communicated to the contractor by the NRC Project Manager.

It is the responsibility of the contractor to assign technical staff, employees, subcontractors, or specialists who have the required educational background, experience, or combination thereof to meet both technical and regulatory objectives of the work specified in this Statement of Work (SOW). The NRC will rely on representations made by the contractor concerning the qualifications of the personnel assigned to this contract including assurance that all information contained in the technical and cost proposals, including resumes, is accurate and truthful.

The results of this effort have the potential to impact entities regulated by the NRC and industry organizations. The contractor must be absolutely free from direct or the appearance of organizational conflict of interest with respect to any of the entities subject to NRC conflict of interest criteria. If any work will be subcontracted or performed by consultants, the contractor shall obtain the NRC's written approval of the subcontractor or consultant prior to initiation of the subcontract effort. Approvals will be communicated to the contractor by the NRC Project Manager. Conflict of interest considerations will also apply to any subcontracted effort.

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WORK REQUIREMENTS AND SCHEDULE

PHASE I - Tasks 1, 2, 3, 4 and 5:

<u>Task</u>

- 1. Overview: (a) Perform the plant level scoping review in accordance with Section 2.2 of NUREG-1800 for all the BOP and fire protection the systems and structures listed in the tables of LRA Section 2.2 to determine if any of the systems and structures (not limited to the BOP systems) that performs intended functions as defined in 10 CFR 54.4 is missing in the LRA, provide request for additional information (RAI) on these missing systems/structures, (b) Work with the NRC staff and using an optional BOP two-tier scoping review process to determine which are the BOP systems to be subject to detailed review in Task 2, (c) Review and evaluate the fire protection AMR presented in Section 3 of the LRA and AMPs presented in Appendix B of the LRA (d) Provide review plan for these systems, determined in Task 1(b), to include reviewer and schedule for each system. Provide the summary of results for Task 1 and the sampling process for Task 1(b) in a Technical Letter Report (TLR).
- Systems and Component Level Review: Perform 2. two-tier review of all the BOP systems according to the level of importance. Tier-2 is a detailed review in accordance with Section 2.3 of NUREG-1800. Tier-1 is a less than detailed review of LRA and FSAR according to the guidance to be provided by the NRC staff. For all the systems, identify those aspects of the LRA that need additional or clarifying information. Determine conformance of fire protection AMR and AMPs with the license renewal rule/technical adequacy, and identify those aspects of the LRA that require RAIs. Identify systems, if any, that need Regional inspection support to verify the results of scoping and screening described in the LRA. Provide this information in a TLR in a format suitable for inclusion in the NRC technical staff's first RAI to the applicant. RAIs should be provided on a staggered basis so that they are not all provided at the same time on the scheduled completion due date, i.e., 2-4 systems per week beginning 5 weeks before the scheduled completion date.

Scheduled Completion

4 weeks after LRA receipt by contractor.

9 weeks after LRA receipt by the contractor

Task

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- 3. Technical Evaluation Report (TER) preparation: Prepare a TER in accordance with the staff template containing draft SER input format. This TER will provide safety evaluation input, with open items to be filled in later with RAI responses, on at least 50% of the required systems to be addressed in the review. (It is the SPLB staff intention to review, edit, and provide this information to RLEP/DRIP/NRR by the 15 week point in the review.) TERs should be provided on a staggered basis so that they are not all provided at the same time on the scheduled completion due date, i.e., 2-4 systems per week beginning 4-5 weeks before the scheduled completion date.
- 4. Travel: If necessary, the contractor shall prepare for and attend a meeting or conference with the applicant to assist in reviewing the LRA and developing and resolving the RAI questions. Travel for two persons of up to one week per trip to the applicant's corporate offices, reactor site, or to NRC Headquarters may be required for these meetings. The contractor shall prepare meeting reports to document how any specific RAI question inputs from the TLR have been resolved. The contractor shall revise TER information accordingly.
- Additional information: On a continuing basis, identify those aspects of the total application that need additional or clarifying information. Provide this information in a TLR in a format suitable for inclusion in the NRC technical staff's follow-up RAIs to the applicant.

PHASE II - Tasks 6, 7 and 8.

<u>Task</u>

6. Issue resolution: Review the applicant's responses to the RAIs to identify those issues that have been resolved along with the basis for resolution, and to identify those items for which further information may be needed, but for which resolution may not be readily forthcoming. Prepare a TER in accordance with the staff template containing draft SER input format. This TER will address 100% of the required systems to be addressed in the review. Within the TER, identify those aspects of the application that still need additional or clarifying information and provide this information as initial "Open Items" for the NRC staff's SER input.

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13 weeks after LRA receipt by the contractor

As necessary, possibly twice during the six months of effort.

As necessary

Scheduled Completion

21 weeks after LRA receipt by the contractor

<u>Task</u>

- 7. Advisory Committee on Reactor Safeguards (ACRS) Meeting Assistance: Participate in meetings of the ACRS as directed by the NRC staff, possibly a significant number of months after major work on this task order has been completed.
- 8. Close out of open items: Based on new input from the applicant, and over approximately three months subsequent to issuance of the final TER with initial open items of Step 6 above, assist the SPLB staff in closing as many open items as may become feasible.
- 9. Project Management: Perform project management as necessary including items such as the preparation of review plan, spending plan, attending meeting, and monthly reports, etc.

PERIOD OF PERFORMANCE

The period of performance is April 14, 2005, through June 30, 2006.

DELIVERABLES

Technical Reporting Requirements

NOTE: All reports are to be submitted electronically using WordPerfect 10.0 (font: Arial regular 11 point) to the TM with a copy provided to the Project Officer. In all correspondence, include identifying information: JCN No., Task No., the applicant, the facility, TAC No., and NRC/NRR Division and Branch.

- 1. Technical letter reports will identify the **RAI** responses reviewed and a list of the issues that have been resolved, the bases for the resolutions, and a list of issues for which further information will be required or discussions will be needed. This information should be in accordance with the organizational format of the LRA or as defined by the TM.
- 2. Meeting reports will contain a summary of major discussion points, decisions and agreements reached, information provided by the applicant, open issues and follow-up actions, who has the action and when the actions are due, and a list of attendees.
- 3. **TERs** will contain the information in the format outlined in the "Style Guide for Preparing a License Renewal Safety Evaluation Report" provided by the TM. The contractor may also be provided with a plant specific SER template provided by the TM. Further, the TM will provide the contractor with a "Style Guide for Preparing a License Renewal Request for Additional Information" for use in preparing **RAIs**.

Contract Reporting Requirements

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Scheduled Completion

As directed by NRC staff.

As called upon subsequent to issuance of the final **TER** with initial open items.

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As necessary.

Monthly Business Letter Reports shall be submitted in accordance with the general contract.

MEETINGS AND TRAVEL

For planning purposes, assume two trips for one person for four days each or one trip for two persons for four days each to the applicant reactor site, corporate/engineering offices, or to NRC Headquarters.

NRC FURNISHED MATERIAL

NRC furnished materials as referenced in Attachment 1 or the appropriate reference locations (i.e. NRC web page address), will be provided to the ISL Project Manager. In addition, copies of the LRA will also be provided.

OTHER APPLICABLE INFORMATION

License Fee Recovery

All work specified in this **SOW** is license fee recoverable and must be charged to TAC numbers that are specific to the applicants docketed submittal.

Understandings and Assumptions

The review goal is to evaluate the LRA in such a way that the documentation results consists of input to be used in the NRC SER and identifies, simultaneously and on a continuing basis as needed, the need for RAIs. That is, where "gaps " exist in the report, there will exist an **RAI** or, ultimately, an initial open item. Initial open items are to eventually be resolved between the applicant and the NRC staff. See the specific reporting requirements that are defined in the Technical Reporting Requirements Section.

The preparation of both the **RAIs** and **TERs** will involve at least two levels of review, first by the staff of SPLB/DSSA, then by the staff of RLEP/DRIP. Reviews of the **RAIs** may include conference calls with the NRC staff, and also with the NRC staff and the applicant in an attempt to obtain additional information or reach resolution. During this task the NRC TM and other NRC personnel may visit the contractor's office to discuss the status of the review and participate in the resolution of open items. However, it is more likely that during this effort the NRC TM, the contractor staff and other NRC personnel may visit the applicant's reactor site or corporate/engineering offices to resolve questions and obtain information. In lieu of visits to the applicant's facilities, the contractor may be requested to attend short meetings at NRC Headquarters to resolve these same issues.

The optional "Two-Tier Scoping Review Process for BOP Systems" was developed from the "Sampling Approach" described in a memorandum from Suzanne C. Black, Director of the Division of Systems Safety and Analysis, Office of Nuclear Reactor Regulation to David B. Matthews, Director, Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation dated August 12, 2004 entitled, "Sampling Approach for the Review of the Scoping and Screening of License Renewal Applications." The ADAMS accession number for this document is ML042010143.

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WEB ADDRESS FOR NRC FURNISHED MATERIAL AVAILABLE ON-LINE

The following NRC furnished materials are available on-line at the web addresses provided below:

- License Renewal Rule, 10 CFR Part 54, "Requirements for Renewal of Operating Licenses For Nuclear Power Plants," as amended in 1995.
- Standard Review Plan for License Renewal (SRP-LR) NUREG-1800 and SRP-LR, Draft, dated January 2005, for the Review of License Renewal Applications for Nuclear Power Plants.
- NUREG-1801, Vol. 1 and Vol. 2, Generic Aging Lessons Learned (GALL) Report, dated July 2001.
- DG-1140, Draft, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses," dated January 2005.
- ISG-04, "Aging Management of Fire Protection Systems for License Renewal," dated December 3, 2002.
- Nuclear Energy Institute Guidance in NEI- 95-10, "Nuclear Energy Institute (NEI) Guidance Document NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54– The License Renewal Rule," Revision 5, January 2005.

The quick link to the various references to Title 10 of the Code of Federal Regulations (10 CFR) is shown below:

http://www.nrc.gov/reading-rm/doc-collections/cfr/

The quick link to the various license renewal reference and guidance documents is shown below:

http://www.nrc.gov/reactors/operating/licensing/renewal/guidance.html