

**SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS
OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30**

1. REQUISITION NO. PAGE 1 OF 14

2. CONTRACT NO. NRC-04-09-161 3. AWARD/EFFECTIVE DATE 9/30/2009 4. ORDER NO. 5. SOLICITATION NUMBER RS-RES-09-161 6. SOLICITATION ISSUE DATE

7. FOR SOLICITATION INFORMATION CALL: 8. NAME HERIBERTO COLÓN JR 9. b. TELEPHONE NO. (No Collect Calls) 301-492-3620 8. OFFER DUE DATE/LOCAL TIME 09-21-2009 4:15 P.M.

9. ISSUED BY U.S. Nuclear Regulatory Commission Div. of Contracts Attn: H. (Eddie) Colón, Jr. Mail Stop: TWB-01-B10M Washington, DC 20555 CODE 3100 10. THIS ACQUISITION IS UNRESTRICTED OR SET ASIDE: % FOR: SMALL BUSINESS EMERGING SMALL BUSINESS HUBZONE SMALL BUSINESS SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS (8(A)) NAICS: 541690 SIZE STANDARD:

11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED SEE SCHEDULE 12. DISCOUNT TERMS 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) 13b. RATING N/A 14. METHOD OF SOLICITATION RFQ IFB RFP

15. DELIVER TO U.S. Nuclear Regulatory Commission Washington DC 20555 CODE 16. ADMINISTERED BY U.S. Nuclear Regulatory Commission Div. of Contracts Mail Stop: TWB-01-B10M Washington, DC 20555 CODE 3100

17a. CONTRACTOR/OFFEROR CODE FACILITY CODE JAMES J. JOHNSON & ASSOCIATES 7 ESSEX COURT ALAMO, CA 94507-2205 TELEPHONE NO. 925-837-4749 18a. PAYMENT WILL BE MADE BY Department of Interior / NBC NRCPayments@nbc.gov Attn: Fiscal Services Branch - D2770 7301 W. Mansfield Avenue Denver CO 80235-2230 CODE 3100

17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER 18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED SEE ADDENDUM

19. ITEM NO.	20. See CONTINUATION Page SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT
	<p>The contractor shall provide the U.S. Nuclear Regulatory Commission (NRC) with "KASHIWAZAKI-KARIWA NPP ANALYSIS AND LESSONS LEARNED REPORT" in accordance with the Statement of Work (SOW), PRICE SCHEDULE, and terms and conditions of this contract.</p> <p>PERIOD OF PERFORMANCE: 9/30/2009 - 09/30/2012</p> <p>TYPE OF CONTRACT: Firm Fixed Price w/ Reimbursable Travel</p> <p>CONTRACTOR DUNS #: 831973545</p>				

(Use Reverse and/or Attach Additional Sheets as Necessary)

25. ACCOUNTING AND APPROPRIATION DATA See CONTINUATION Page 960-15-111-128 N6743 252A 31X0200.960 26. TOTAL AWARD AMOUNT (For Govt. Use Only) \$45,200.00 (Excludes Optional Items) OBLIGATE \$30,000.00 (FFS Commitment #: RES-C09-585)

27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4, FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA ARE ARE NOT ATTACHED. 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA ARE ARE NOT ATTACHED.

28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN 1 COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED 29. AWARD OF CONTRACT: REF. OFFER DATED YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN IS ACCEPTED AS TO ITEMS.

30a. SIGNATURE OF OFFEROR/CONTRACTOR James J. Johnson 31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER) Heriberto Colón, Jr. 30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT) JAMES J. JOHNSON 30c. DATE SIGNED 9/30/2009 31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT) Heriberto Colón, Jr. Contracting Officer 31c. DATE SIGNED 9/30/2009 OWNER/PRESIDENT

OCT 02 2009

SUNSI REVIEW COMPLETE

ADMO02

TEMPLATE - ADM001

19. ITEM NO.	20. SCHEDULE OF SUPPLIES/SERVICES	21. QUANTITY	22. UNIT	23. UNIT PRICE	24. AMOUNT

32a. QUANTITY IN COLUMN 21 HAS BEEN

RECEIVED
 INSPECTED
 ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED: _____

32b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32c. DATE	32d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE
--	-----------	---

32e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE	32f. TELEPHONE NUMBER OF AUTHORIZED GOVERNMENT REPRESENTATIVE
	32g. E-MAIL OF AUTHORIZED GOVERNMENT REPRESENTATIVE

33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	34. VOUCHER NUMBER	35. AMOUNT VERIFIED CORRECT FOR	36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL	37. CHECK NUMBER
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38. S/R ACCOUNT NUMBER	39. S/R VOUCHER NUMBER	40. PAID BY
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41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT 41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER	42a. RECEIVED BY (Print)
	42b. RECEIVED AT (Location)
	42c. DATE REC'D (YY/MM/DD) 42d. TOTAL CONTAINERS

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SECTION B - CONTINUATION BLOCK

B.1 PRICE/COST AND DELIVERY SCHEDULE

Phase 1 - Report Providing Summarization of Existing Information: - Firm Fixed Price (FFP): \$28,000.00

Deliverable: Develop a preliminary report summarizing information available as of September 2009 and detailing initial lessons learned in consultation with NRC Staff.

Pricing and Payment Schedule: FFP: \$28,000

\$22,400 on submittal of deliverable - Est. January 2010;

\$5,600 on incorporation of NRC comments and re-submittal - Est. February 2010

Total Estimated Not-to-Exceed Travel Amount (Reimbursable) - \$20,200

\$14,000 (2 trips x 2 days duration to US NRC Est. for late 2009/early 2010 and latter part of 2010)

\$6,200 (2 international trips to Japan (2 X \$6,500), 1 trip to Washington DC (\$2,400)) - Est. June 2011

Total FFP Phase 1 + Reimbursable Travel ...or all Phases..... \$48,200.00

OPTIONAL SEPERATELY PRICED LINE ITEMS/SERVICES

Phase 2 - Comparison of U.S. and Japanese Approaches and Review of KKNPP Performance -

Cumulative Total Firm Fixed Price (FFP): \$77,000.00 (OPTIONAL - See below for each Optional Item/Service)

Deliverable: Compare U.S. and Japanese seismic design standards and calculational methods, as well as load combinations and document comparison.

Pricing and Payment Schedule: FFP: \$21,000 (Optional)

\$16,800 on submittal of deliverable - Est. March 2010

\$4,200 on incorporation of NRC comments and re-submittal - Est. April 2010

Deliverable: Comparison of the performance of the Kashiwazaki-Kariwa NPP to Japanese seismic design standards. Document comparison

Est. Completion Date: Submittal of comparison information for NRC review - May 2010.

Pricing and Payment Schedule: FFP: \$28,000 (Optional)

\$24,000 on submittal of deliverable - Est. May 2010;

\$4,000 on incorporation of NRC comments and re-submittal - Est. June 2010

Deliverable: In consultation with NRC Staff, perform the evaluation of the potential vulnerability of U.S. seismic designs to earthquakes and seismic activity, based on the July 16, 2007 Niigata Prefecture Chuetsu-Oki earthquake and Document results.

Est. Completion Date: July/August 2010

Pricing and Payment Schedule: FFP: \$28,000 (Optional)

\$22,400 on submittal of deliverable - Est. July 2010;

\$5,600 on incorporation of NRC comments and re-submittal - Est. August 2010

Total Phase 2 (Optional)..... \$77,000.00

Phase 3 - Participate in International Activities to Analyze KKNPP - Firm Fixed Price (FFP): \$56,000 (OPTIONAL)

Deliverable: With NRC Staff, participate in KARISMA benchmarking exercises organized IAEA to evaluate modeling and analytical methods based on information provided by TEPCO under agreement with IAEA.

Est. Completion Date: December 2011

Pricing and Payment Schedule: FFP: \$56,000 (Optional)

██████████ after Japan trip Est. April 2010

██████████ after Japan trip Est. April 2011 and Washington, DC trip Est. June 2011

Total FFP Phase 3 (Optional)..... \$56,000.00

Phase 4: Issue Final Report Firm Fixed Price (FFP): \$42,000 (OPTIONAL - See below for each Optional Item/Service)

Deliverable: Draft Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report, including information developed in tasks (2) to (5) and including proposal of possible applications of lessons learned to NRC programs and processes

Est. Completion Date: June 2012

Pricing and Payment Schedule: FFP: \$28,000 (Optional)

██████████ after submittal of draft report Est. June 2012

Deliverable: Final Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report.

Completion Date: 30 September 2012

Pricing and Payment Schedule: FFP: \$14,000 (Optional)

Est. September 2012 after delivery and acceptance of Final Report

Total FFP Phase 4 (Optional)..... \$42,000.00

Cumulative Total Value, including options..... \$223,200.00

B.2 STATEMENT OF WORK

Refer to Section D. and **Attachment 1 - SOW**

SECTION C - CONTRACT CLAUSES**C.1 52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (AUG 2009)**

(a) The Contractor shall comply with the following Federal Acquisition Regulation (FAR) clauses, which are incorporated in this contract by reference, to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.222-50, Combatting Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104 (g)).

(2) 52.233-3, Protest After Award (Aug 1996) (31 U.S.C. 3553).

(3) 52.233-4, Applicable Law for Breach of Contract Claim (Oct 2004) (Pub. L. 108-77, 108-78)

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

(1) 52.203-6, Restrictions on Subcontractor Sales to the Government (Sept 2006), with Alternate I (Oct 1995) (41 U.S.C. 253g and 10 U.S.C. 2402).

(2) 52.203-13, Contractor Code of Business Ethics and Conduct (DEC 2008)(Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(3) 52.203-15, Whistleblower Protections under the American Recovery and Reinvestment Act of 2009 (MAR 2009) (Section 1553 of Pub. L. 111-5). (Applies to contracts funded by the American Recovery and Reinvestment Act of 2009.)

(4) 52.204-11, American Recovery and Reinvestment Act-Reporting Requirements (MAR 2009) (Pub. L. 111-5).

(5) 52.219-3, Notice of Total HUBZone Set-Aside (Jan 1999) (15 U.S.C. 657a).

(6) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (July 2005) (if the offeror elects to waive the preference, it shall so indicate in its offer) (15 U.S.C. 657a).

(7) [Reserved]

(8)(i) 52.219-6, Notice of Total Small Business Set-Aside (June 2003) (15 U.S.C. 644).

(ii) Alternate I (Oct 1995) of 52.219-6.

(iii) Alternate II (Mar 2004) of 52.219-6.

(9)(i) 52.219-7, Notice of Partial Small Business Set-Aside (June 2003) (15 U.S.C. 644).

(ii) Alternate I (Oct 1995) of 52.219-7.

- (iii) Alternate II (Mar 2004) of 52.219-7.
- (10) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)).
- (11)(i) 52.219-9, Small Business Subcontracting Plan (APR 2008) (15 U.S.C. 637(d)(4)).
- (ii) Alternate I (Oct 2001) of 52.219-9.
- (iii) Alternate II (Oct 2001) of 52.219-9.
- (12) 52.219-14, Limitations on Subcontracting (Dec 1996) (15 U.S.C. 637(a)(14)).
- (13) 52.219-16, Liquidated Damages--Subcontracting Plan (Jan 1999) (15 U.S.C. 637(d)(4)(F)(i)).
- (14)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (OCT 2008) (10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer.)
- (ii) Alternate I (June 2003) of 52.219-23.
- (15) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (APR 2008) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (16) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Oct 2000) (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (17) 52.219-27, Notice of Total Service-Disabled Veteran-Owned Small Business Set-Aside (May 2004) (15 U.S.C. 657 f).
- (18) 52.219-28, Post Award Small Business Program Rerepresentation (APR 2009) (15 U.S.C. 632(a)(2)).
- (19) 52.222-3, Convict Labor (June 2003) (E.O. 11755).
- (20) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (AUG 2009) (E.O. 13126).
- (21) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- (22) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).
- (23) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) (38 U.S.C. 4212).
- (24) 52.222-36, Affirmative Action for Workers with Disabilities (Jun 1998) (29 U.S.C. 793).
- (25) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) (38 U.S.C. 4212).
- (26) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).
- (27) 52.222-54, Employment Eligibility Verification (Jan 2009). (Executive Order 12989). (Not applicable to the acquisition of commercially available off-the-shelf items or certain other types of commercial items as prescribed in 22.1803.)

(28)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Items (May 2008) (42 U.S.C.6962(c)(3)(A)(ii)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

(ii) Alternate I (MAY 2008) of 52.223-9 (42 U.S.C. 6962(i)(2)(C)). (Not applicable to the acquisition of commercially available off-the-shelf items.)

(29) 52.223-15, Energy Efficiency in Energy-Consuming Products (DEC 2007)(42 U.S.C. 8259b).

(30)(i) 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products (DEC 2007) (E.O. 13423).

(ii) Alternate I (DEC 2007) of 52.223-16.

(31) 52.225-1, Buy American Act--Supplies (FEB 2009) (41 U.S.C. 10a-10d).

(32)(i) 52.225-3, Buy American Act--Free Trade Agreements-- Israeli Trade Act (JUN 2009) (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note, 19 U.S.C 3805 note, Pub. L. 108-77, 108-78, 108-286, 108-302, 109-53 and 109-169, 109-283, and 110-138).

(ii) Alternate I (Jan 2004) of 52.225-3.

(iii) Alternate II (Jan 2004) of 52.225-3.

(33) 52.225-5, Trade Agreements (AUG 2009) (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).

(34) 52.225-13, Restrictions on Certain Foreign Purchases (JUN 2008) (E.O.'s, proclamations, and statutes administered by the Office of Foreign Assets Control of the Department of the Treasury).

(35) 52.226-4, Notice of Disaster or Emergency Area Set-Aside (Nov 2007) (42 U.S.C. 5150).

(36) 52.226-5, Restrictions on Subcontracting Outside Disaster or Emergency Area (Nov 2007) (42 U.S.C. 5150).

(37) 52.232-29, Terms for Financing of Purchases of Commercial Items (Feb 2002) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

(38) 52.232-30, Installment Payments for Commercial Items (Oct 1995) (41 U.S.C. 255(f), 10 U.S.C. 2307(f)).

(39) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (Oct 2003) (31 U.S.C. 3332).

(40) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (May 1999) (31 U.S.C. 3332).

(41) 52.232-36, Payment by Third Party (May 1999) (31 U.S.C. 3332).

(42) 52.239-1, Privacy or Security Safeguards (Aug 1996) (5 U.S.C. 552a).

(43)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631).

(ii) Alternate I (Apr 2003) of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items:

□ (1) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).

□ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (May 1989) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

Employee Class

Monetary Wage-Fringe Benefits

□ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Multiple Year and Option Contracts) (Nov 2006) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

□ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act--Price Adjustment (Feb 2002) (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

□ (5) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements (Nov 2007) (41 U.S.C. 351, et seq.).

□ (6) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services--Requirements (FEB 2009) (41 U.S.C. 351, et seq.).

□ (7) 52.226-6, Promoting Excess Food Donation to Nonprofit Organizations. (MAR 2009)(Pub. L. 110-247)

□ (8) 52.237-11, Accepting and Dispensing of \$1 Coin (SEP 2008) (31 U.S.C. 5112(p)(1)).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e)(1) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c), and (d) of this clause, the Contractor is not required to flow down any FAR clause, other than those in this paragraph (e)(1) in a subcontract for commercial items. Unless otherwise indicated below, the extent of the flow down shall be as required by the clause--

(i) 52.203-13, Contractor Code of Business Ethics and Conduct (DEC 2008) (Pub. L. 110-252, Title VI, Chapter 1 (41 U.S.C. 251 note)).

(ii) 52.219-8, Utilization of Small Business Concerns (May 2004) (15 U.S.C. 637(d)(2) and (3)), in all subcontracts that offer further subcontracting opportunities. If the subcontract (except subcontracts to small business concerns) exceeds \$550,000 (\$1,000,000 for construction of any public facility), the subcontractor must include 52.219-8 in lower tier subcontracts that offer subcontracting opportunities.

(iii) [Reserved]

(iv) 52.222-26, Equal Opportunity (Mar 2007) (E.O. 11246).

(v) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (Sept 2006) (38 U.S.C. 4212).

(vi) 52.222-36, Affirmative Action for Workers with Disabilities (June 1998) (29 U.S.C. 793).

(vii) 52.222-39, Notification of Employee Rights Concerning Payment of Union Dues or Fees (Dec 2004) (E.O. 13201).

(viii) 52.222-41, Service Contract Act of 1965 (Nov 2007) (41 U.S.C. 351, et seq.).

(ix) 52.222-50, Combating Trafficking in Persons (FEB 2009) (22 U.S.C. 7104(g)).

Alternate I (AUG 2007) of 52.222-50 (22 U.S.C. 7104(g)).

(x) 52.222-51, Exemption from Application of the Service Contract Act to Contracts for Maintenance, Calibration, or Repair of Certain Equipment--Requirements "(Nov 2007)" (41 U.S.C. 351, et seq.).

(xi) 52.222-53, Exemption from Application of the Service Contract Act to Contracts for Certain Services-Requirements (FEB 2009)(41 U.S.C. 351, et seq.).

(xii) 52.222-54, Employee Eligibility Verification (JAN 2009)

(xiii) 52.226-6, Promoting Excess Food Donataion to Nonprofit Organizations. (MAR 2009)(Pub. L. 110-247). Flow down required in accordance with paragraph (e) of FAR clause 52.226-6.

(xiv) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (Feb 2006) (46 U.S.C. Appx. 1241(b) and 10 U.S.C. 2631). Flow down required in accordance with paragraph (d) of FAR clause 52.247-64.

(2) While not required, the contractor may include in its subcontracts for commercial items a minimal number of additional clauses necessary to satisfy its contractual obligations.

C.2 CONSIDERATION AND OBLIGATION--FIRM FIXED PRICE (JUN 1988) (LABOR)

The FIRM FIXED PRICE of this contract for **PHASE 1 - REPORT PROVIDING SUMMARIZATION OF EXISTING INFORMATION** of this contract is \$28,000.00.

The FIRM FIXED PRICE of this contract for **PHASE 2 - COMPARISON OF U.S. AND JAPANESE APPROACHES AND REVIEW OF KKNPP PERFORMANCE** of this contract is \$77,000.00. (Optional)

The FIRM FIXED PRICE of this contract for **PHASE 3 - PARTICIPATE IN INTERNATIONAL ACTIVITIES TO ANALYZE KKNPP** of this contract is \$28,000.00.

The FIRM FIXED PRICE of this contract for **PHASE 4 - PARTICIPATE IN INTERNATIONAL ACTIVITIES TO ANALYZE KKNPP** of this contract is \$28,000.00.

C.3 CONSIDERATION AND OBLIGATION--COST REIMBURSEMENT (TRAVEL) (JUN 1988)

(a) The total estimated cost to the Government for TRAVEL under this contract is \$20,200.00.

(b) The amount obligated by the Government with respect to this contract for TRAVEL is \$2,000.00*.

Refer to **C.7 2052.215-78 TRAVEL APPROVALS AND REIMBURSEMENT - ALTERNATE 1 (OCT 1999)**

C.4 52.217-7 OPTION FOR INCREASED QUANTITY--SEPARATELY PRICED LINE ITEM (MAR 1989)

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 10 days. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree.

C.5 PROJECT OFFICER AUTHORITY ALTERNATE 2 (FEBRUARY 2004)

(a) The contracting officer's authorized representative hereinafter referred to as the project officer for this contract is:

Name: **Richard Rivera-Lugo/Annie Kammerer (Technical Monitor)**

Address: **U.S. Nuclear Regulatory Commission
RES/DE/SGSEB
Mail Stop: CSB-5A24M
Washington, DC 20555**

Telephone Number: **301-251-7652/301 251-7695**

(b) The project officer shall:

(1) Monitor contractor performance and recommend changes in requirements to the contracting officer.

(2) Inspect and accept products/services provided under the contract.

(3) Review all contractor invoices/vouchers requesting payment for products/services provided under the contract and make recommendations for approval, disapproval, or suspension.

(4) Immediately notify the Security Branch, Division of Facilities and Security (SB/DFS) (via e-mail) when a contractor employee no longer requires access authorization and return of any NRC issued badge to SB/DFS within three days after their termination.

(c) The project officer may not make changes to the express terms and conditions of this contract.

C.6 52.217-8 OPTION TO EXTEND SERVICES (NOV 1999)

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 10 days.

C.7 2052.215-78 TRAVEL APPROVALS AND REIMBURSEMENT -ALTERNATE 1 (OCT 1999)

(a) Total expenditure for travel may not exceed \$2,400.00 without the prior approval of the contracting officer.

(b) All foreign travel must be approved in advance by the NRC on NRC Form 445, Request for Approval of Official Foreign Travel, and must be in compliance with FAR 52.247-63 Preference for U.S. Flag Air Carriers. The contractor shall submit NRC Form 445 to the NRC no later than 30 days prior to the commencement of travel.

(c) The contractor will be reimbursed only for those travel costs incurred that are directly related to this contract and which are allowable subject to the limitations prescribed in FAR 31.205-46.

(d) It is the responsibility of the contractor to notify the contracting officer in accordance with the FAR Limitations of Cost clause of this contract when, at any time, the contractor learns that travel expenses will cause the contractor to exceed the travel ceiling amount identified in paragraph (a) of this clause.

(e) Reasonable travel costs for research and related activities performed at State and nonprofit institutions, in accordance with Section 12 of Pub. L. 100-679, shall be charged in accordance with the contractor's institutional policy to the degree that the limitations of Office of Management and Budget (OMB) guidance are not exceeded. Applicable guidance documents include OMB Circular A-87, Cost Principles for State and Local Governments; OMB Circular A-122, Cost Principles for Nonprofit Organizations; and OMB Circular A-21, Cost Principles for Educational Institutions.

C.8 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.

SECTION D - CONTRACT DOCUMENTS, EXHIBITS, OR ATTACHMENTS**D.1 PLACE OF DELIVERY--REPORTS (JUN 1988)**

The items to be furnished hereunder shall be delivered, with all charges paid by the Contractor, to:

(a) Project Officer (1 copy)

U. S. Nuclear Regulatory Commission
Mail Stop: C5C07M
Washington, D. C. 20555-0001

Richard Rivera-Lugo
Phone: (301) 251-7652
Fax: (301) 251-7420
Email: Richard.Rivera-Lugo@nrc.gov

Annie Kammerer
Phone: (301) 251-7695
Fax: (301) 251-7425
Email: Annie.Kammerer@nrc.gov

Express mail shall be sent to:
U. S. Nuclear Regulatory Commission
Mail Stop: C5C07M
21 Church Street
Rockville, MD 20850

(b) Contracting Officer (1 copy)

U.S. Nuclear Regulatory Commission
ADM/DC/CMB2
ATTN: H. (Eddie) Colón, Jr.
Mail Stop: TWB-01-10M
Washington, DC 20555
Heriberto.Colon@nrc.gov

D.2 ATTACHMENTS

1. Statement of Work (SOW)
2. Billing Instructions

STATEMENT OF WORK FOR COMMERCIAL

TITLE: **KASHIWAZAKI-KARIWA NPP ANALYSIS AND LESSONS LEARNED REPORT**

BACKGROUND

On July 16, 2007 an earthquake occurred under the world's largest nuclear plant, the Kashiwazaki-Kariwa Nuclear Power Plant (KKNPP) located in the Niigata prefecture of Japan. The earthquake exceeded the plant's seismic design basis and caused an extended period of shutdown of all seven reactors at the plant. The Nuclear Regulatory Commission (NRC) has identified a need to identify and document the lessons learned from this earthquake and NRC staff have been working since the earthquake to collect lessons learned, to better understand differences between U.S. and Japanese design approaches, and to obtain quantitative data on plant performance during the event. In this regard, NRC staff has been working both in-house and through international avenues, such as by meeting with Japanese colleagues and through involvement with the activities of the International Atomic Energy Agency (IAEA).

As part of the effort to fully analyze this event, the NRC is participating in an IAEA Extra-Budgetary Program (EBP) on Seismic Issues. Under this EBP, participants will perform numerical analysis of data provided by Tokyo Electric Power Company (TEPCO) to the IAEA. The NRC will undertake structural analysis of elements of the plant using typical U.S. methods as part of The EBP and will compare the results of the analysis to damage patterns, or in some cases lack of damage, observed at various structures within the plant.

Because most of the information regarding the KKNPP that has been provided to the NRC Staff and to the contractor (as a result of his work as a consultant to IAEA) has been provided on a proprietary or confidential basis, it is anticipated that the reporting that results from this work will be used for internal purposes only.

OBJECTIVE

The objective of this work is to develop, analyze and document the impact and lessons learned of the July 16, 2007 earthquake that affected the Kashiwazaki-Kariwa Nuclear Power Plant in the Niigata prefecture of Japan. To meet this objective, this work will undertake tasks related to a number of topical areas, including: summarizing existing information detailing the impacts of the earthquake on the facility; summarizing known lessons learned as identified by Japanese, IAEA and NRC staff; undertaking a comparison of U.S. and Japanese approaches; undertaking a review of the possible implications of the lessons learned on U.S. plants and processes; undertaking a numerical analysis of information that will be provided to the International Atomic Energy Agency Extra-Budgetary Project on Seismic Issues; and documenting all findings in a Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report.

SCOPE OF WORK

Phase 1: Report Providing Summarization of Existing Information:

- (1) Develop a preliminary (internal) report summarizing information available as of September 2009 and detailing initial lessons learned in consultation with NRC Staff. This report shall cover all relevant topics, such as seismological information, known plant response, known damage and earthquake-related events, human factors, post-earthquake activities and actions, IAEA findings, and other relevant topics

Phase 2: Comparison of U.S. and Japanese Approaches and Review of KKNPP Performance

- (2) Compare U.S. and Japanese seismic design standards and calculational methods, as well as load combinations and document the comparison. The task shall be performed in consultation with NRC staff. The documentation shall be developed in a format that can be provided to NRC seismic-related staff prior to the publication of the final report. The comparison shall also be included as a chapter in the final report.
- (3) Compare the performance of the Kashiwazaki-Kariwa NPP to Japanese seismic design standards and document comparison. The task shall be performed in consultation with NRC staff. The documentation shall be developed in a format that can be provided to NRC seismic-related staff prior to the publication of the final report. The comparison shall also be included as a chapter in the final report.
- (4) In consultation with NRC Staff, perform and document potential vulnerability of U.S. seismic designs to earthquakes and seismic activity, based on the July 16, 2007 Niigata Prefecture Chuetsu-Oki earthquake. The documentation shall be developed in a format that can be provided to NRC seismic-related staff prior to the publication of the final report. The comparison shall also be included as a chapter in the final report.

Phase 3: Participate in International Activities to Analyze KKNPP

- (5) With NRC Staff, participate in Kashiwazaki-Kariwa Research Initiative for Seismic Margin Assessment (KARISMA) benchmarking exercises organized within the IAEA EBP to evaluate the response of the KKNPP and to evaluate the modeling and analytical methods used in the U.S. The KARISMA benchmark project is based on information and data provided by TEPCO under agreement with IAEA. Participation of the consultant will include: analysis of the KKNPP data provided by TEPCO using typical U.S. tools and methods such that the benchmark can identify possible issues related to U.S. approaches; documentation of the analysis as required by the KARISMA benchmark project; and participation in KARISMA-related EBP workshops focused on comparison of results (2 international trips are expected). The documentation of the KARISMA benchmark results shall also be included in the final report to the NRC.

Phase 4: Issue Final Report

- (6) Preparation of the draft Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report, including information developed in tasks (2) to (5) and including proposal of possible applications of lessons learned to NRC programs and processes
- (7) Provide Final Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report

Some of the above phases may occur concurrently or in an order than that shown as a result of the acquisition of data and information from IAEA or other sources. All above documentation-

related deliverables shall be provided to NRC Staff in draft form and finalized one month after obtaining NRC Staff comments and input.

RESEARCH QUALITY

The quality of NRC research programs are assessed each year by the Advisory Committee on Reactor Safeguards. Within the context of their reviews of RES programs, the definition of quality research is based upon several major characteristics:

- Results meet the objectives (75% of overall score)
- Justification of major assumptions (12%)
- Soundness of technical approach and results (52%)
- Uncertainties and sensitivities addressed (11%)

- Documentation of research results and methods is adequate (25% of overall score)
- Clarity of presentation (16%)
- Identification of major assumptions (9%)

It is the responsibility of the contractor to ensure that these quality criteria are adequately addressed throughout the course of the research that is performed. The NRC project manager and technical monitor will review all research products with these criteria in mind.

TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED

The successful completion of this project requires special qualifications. Specifically, the Principal Investigator shall have a high level of understanding of, and experience with, the SSHAC guidelines and their application to level 3 and level 4 projects.

PERIOD OF PERFORMANCE

The period of performance of this contract is **September 30, 2009 through September 30, 2012** to align with the IAEA EBP benchmark activities.

REPORTING REQUIREMENTS

Reporting requirements for this project include Monthly Letter Status Reports, which provide information on project activities and financial status, as well as the project deliverables. Information on these project requirements are provided in the following sections.

Monthly Letter Status Report.

A Monthly Letter Status Report (MLSR) is to be submitted to the NRC Project Manager, Richard Rivera-Lugo, NRC Technical Monitor, Annie Kammerer, IAEA EBP Co-Chair, Andy Murphy, and the Division of Engineering Financial System by the 20th of the month following the month to be reported by providing digital copies to the following emails:

Richard.Rivera-Lugo@nrc.gov

Annie.Kammerer@nrc.gov

RESDEMLSR.Resource@nrc.gov

The MLSR will identify the title of the project, the job code, the Principal Investigator, the period of performance, the reporting period, summarize each month's technical progress, list monthly spending, total spending to date, and the remaining funds and will contain information as directed in NRC Management Directive 11.1. Any administrative or technical difficulties which may affect the schedule or costs of the project shall be immediately brought to the attention of the NRC project manager.

PUBLICATIONS NOTE

RES encourages the publication of the scientific results from RES sponsored programs in refereed scientific and engineering journals as appropriate. If the laboratory proposes to publish in the open literature or present the information at meeting in addition to submitting the required technical reports, approval of the proposed article or presentation shall be obtained from the NRC Project Manager. The RES Project Manager shall either approve the material as submitted, approve it subject to NRC suggested revisions, or disapprove it. In any event, the RES Project Manager may disapprove or delay presentation or publication of papers on information that is subject to Commission approval that has not been ruled upon or which has been disapproved. Additional information regarding the publication of NRC sponsored research is contained in NRC Management Directives 3.7, "NUREG Series Publications," and 3.9, "NRC Staff and Contractor Speeches, Papers, and Journal Articles on Regulatory and Technical Subjects."

If the presentation or paper is in addition to the required technical reports and the RES Project Manager determines that it will benefit the RES project, the Project Manager may authorize payment of travel and publishing costs, if any, from the project funds. If the Project Manager determines that the article or presentation would not benefit the RES project, the costs associated with the preparation, presentation, or publication will be borne by the contractor. For any publication or presentations falling into this category, the NRC reserves the right to require that such presentation or publication will not identify the NRC's sponsorship of the work.

NEW STANDARDS FOR CONTRACTORS WHO PREPARE NUREG-SERIES MANUSCRIPTS

The U.S. Nuclear Regulatory Commission (NRC) began to capture most of its official records electronically on January 1, 2000. The NRC will capture each final NUREG-series publication in its native application. Therefore, please submit your final manuscript that has been approved by your NRC Project Manager in both electronic and camera-ready copy.

All format guidance, as specified in NUREG- 0650, Revision 2, will remain the same with one exception. You will no longer be required to include the NUREG-series designator on the bottom of each page of the manuscript. The NRC will assign this designator when we send the camera-ready copy to the printer and will place the designator on the cover, title page, and spine. The designator for each report will no longer be assigned when the decision to prepare a publication is made. The NRC's Publishing Services Branch will inform the NRC Project Manager for the publication of the assigned designator when the final manuscript is sent to the printer.

For the electronic manuscript, the Contractor shall prepare the text in Microsoft Word, and use any of the following file types for charts, spreadsheets, and the like.

File Types to be Used for NUREG-Series Publications	
File Type	File Extension
Microsoft®Word®	.doc
Microsoft® PowerPoint®	.ppt
Microsoft®Excel	.xls
Microsoft®Access	.mdb
Portable Document Format	.pdf

This list is subject to change if new software packages come into common use at NRC or by our licensees or other stakeholders that participate in the electronic submission process. If a portion of your manuscript is from another source and you cannot obtain an acceptable electronic file type for this portion (e.g., an appendix from an old publication), the NRC can, if necessary, create a tagged image file format (file extension.tif) for that portion of your report. Note that you shall continue to submit original photographs, which will be scanned, since digitized photographs do not print well.

If you choose to publish a compact disk (CD) of your publication, place on the CD copies of the manuscript in both (1) a portable document format (PDF); (2) a Microsoft Word file format, and (3) an Adobe Acrobat Reader, or, alternatively, print instructions for obtaining a free copy of Adobe Acrobat Reader on the back cover insert of the jewel box.

DELIVERABLES/SCHEDULES AND/OR MILESTONES

In addition to the Monthly Letter Status Reports, the below documents are deliverables to this project with due dates as shown. These documents shall be developed based on consultation with NRC Staff and must be submitted to the NRC Project Manager and Technical Monitor for comments. NRC Staff will review all submitted documents and provide comments within one month. The schedule shown was developed based on expected progression of the international SSHAC level 3 studies such that they have progressed to a point where the lessons learned from the projects are known and meaningful.

Phase 1 Report Providing Summarization of Existing Information:

- (2) Develop a preliminary report summarizing information available as of September 2009 and detailing initial lessons learned in consultation with NRC Staff
Estimated Completion Date: January 2010

Phase 2 Comparison of U.S. and Japanese Approaches and Review of KKNPP Performance:

- (2) Compare U.S. and Japanese seismic design standards and calculational methods, as well as load combinations and document comparison
Est. Completion Date: March 2010
- (3) Compare the performance of the Kashiwazaki-Kariwa NPP to Japanese seismic design standards and document comparison
Estimated Completion Date: May 2010
- (4) In consultation with NRC Staff, perform and document potential vulnerability of U.S. seismic designs to earthquakes and seismic activity, based on the July 16, 2007 Niigata Prefecture Chuetsu-Oki earthquake
Estimated Completion Date: July 2010

Phase 3 Participate in International Activities to Analyze KKNPP:

- (5) With NRC Staff, participate in KARISMA benchmarking exercises organized IAEA to evaluate modeling and analytical methods based on information provided by TEPCO under agreement with IAEA.
Estimated Completion Date: December 2011

Phase 4: Issue Final Report

- (6) Preparation of the draft Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report, including information developed in tasks (2) to (5) and including proposal of possible applications of lessons learned to NRC programs and processes
Estimated Completion Date: June 2012
- (7) Provide Final Kashiwazaki-Kariwa NPP Analysis and Lessons Learned Report
Estimated Completion Date: September 2012

ESTIMATED MEETINGS AND TRAVEL

It is anticipated that this project will require four trips by the Principal Investigator from the San Francisco bay area to NRC headquarters in Rockville, Maryland for approximately two days each for the purpose of developing and discussing the NUREG/CR with NRC Staff. It is also expected that the Principal Investigator will take two international trips, to Japan, to participate in the IAEA EBP benchmark meetings.

NRC-FURNISHED MATERIAL

None.

TECHNICAL DIRECTION

Technical direction will be provided by the Project Manager, Richard Rivera-Lugo, and Technical Monitor, Annie Kammerer, who can be reached at:

U. S. Nuclear Regulatory Commission
Mail Stop: C5C07M
Washington, D. C. 20555-0001

Richard Rivera-Lugo
Phone: (301) 251-7652
Fax: (301) 251-7420
Email: Richard.Rivera-Lugo@nrc.gov

Annie Kammerer
Phone: (301) 251-7695
Fax: (301) 251-7425
Email: Annie.Kammerer@nrc.gov

Express mail shall be sent to:
U. S. Nuclear Regulatory Commission
Mail Stop: C5C07M
21 Church Street
Rockville, MD 20850