

**ORDER FOR SUPPLIES OR SERVICES**

PAGE OF PAGES

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

BPA NO.

1. DATE OF ORDER <b>AUG 18 2008</b>	2. CONTRACT NO. (if any) NRC-42-07-482	6. SHIP TO:	
3. ORDER NO. 0019	MODIFICATION NO.	a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission	
4. REQUISITION/REFERENCE NO. 42-07-482to19 NRO 0226		b. STREET ADDRESS Attn: Robert Fretz 301-415-1980 Mail Stop: T6-C34	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Kala Shankar 301-415-6310 Mail Stop T-7-I-2 Washington, DC 20555		c. CITY Washington	e. ZIP CODE 20555
7. TO:		d. STATE DC	f. SHIP VIA

a. NAME OF CONTRACTOR ENERGY RESEARCH INC		8. TYPE OF ORDER	
b. COMPANY NAME		<input type="checkbox"/> a. PURCHASE	<input checked="" type="checkbox"/> b. DELIVERY
c. STREET ADDRESS 6167 EXECUTIVE BLVD		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 ROCKVILLE		e. STATE MD	f. ZIP CODE 208523901

9. ACCOUNTING AND APPROPRIATION DATA Attention NRC Accounting office - see block 17B for appropriation data Contractor DUNS: 621211259		10. REQUISITIONING OFFICE NRO
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11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT Destination
<input checked="" type="checkbox"/> a. SMALL	<input type="checkbox"/> b. OTHER THAN SMALL	<input type="checkbox"/> c. DISADVANTAGED	<input type="checkbox"/> 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)	16. DISCOUNT TERMS NET 30
a. INSPECTION	b. ACCEPTANCE			

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	Issuance of Task Order No. 19 under Contract No. NRC-42-07-482  Title: "Technical assistance in review of the Fermi application for combined license in the areas relating to Geotechnical engineering" Period of Performance: 08/18/2008 - 08/17/2011 Estimated Reimbursable Cost: \$176,428.99 Fixed Fee: \$8,821.45 Total Cost Plus Fixed Fee: \$185,250.43  Funding in the amount of \$130,872.11 is being provided.  See attached pages for a description of Task Order 19  *****NOTE TO NRC ACCOUNTING OFFICE***** \$130,872.11 PREVIOUSLY OBLIGATED UNDER THE BASE CONTRACT NRC 72515171111; Q4013; 252A; 31x0200; PFS NRO-07-482					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.				
	21. MAIL INVOICE TO:						
	a. NAME U.S. Nuclear Regulatory Commission Payment Team, Mail Stop T-9-H-4					\$185,250.43	17(h) TOTAL (Cont. pages)  17(i) GRAND TOTAL
	b. STREET ADDRESS (or P.O. Box) Attn: NRC-42-07-482, Task Order 19						
c. CITY Washington	d. STATE DC	e. ZIP CODE 20555					

22. UNITED STATES OF AMERICA BY (Signature)  <i>Kala Shankar</i>	23. NAME (Typed) Kala Shankar Contracting Officer TITLE: CONTRACTING/ORDERING OFFICER
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OPTIONAL FORM 347 (REV. 4/2006)  
PRESCRIBED BY GSA/FAR 48 CFR 53.213(f)

**TEMPLATE - ADMOD**

**SUNSI REVIEW COMPLETE**

OCT 22 2008

**ADMOD**

In accordance with Section G.4, Task Order Procedures, of Contract No. NRC-42-07-482, this definitizes Task Order No. 19. The effort shall be performed in accordance with the attached Statement of Work.

Task Order No. 19 shall be in effect from August 18, 2008 through August 17, 2011, with a cost ceiling of \$185,250.43. The amount of \$176,428.99 represents the estimated reimbursable costs, and the amount of \$8,821.45 represents the fixed fee.

The amount obligated by the Government with respect to this task order is \$130,872.11, of which \$124,640.11 represents the estimated reimbursable costs, and the amount of \$6,232 represents the fixed fee.

The issuance of this task order does not amend any terms or conditions of the subject contract.

Your contacts during the course of this task order are:

Technical Matter: Karen Chapman  
Project Officer  
301-415-3653

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

Acceptance of Task Order No. 19 should be made by having an official, authorized to bind your organization, execute three copies of this document in the space provided and return two copies to the Contract Specialist at the address identified in Block No. 5 of the OF 347. You should retain the third copy for your records.

ACCEPTANCE:

John Kull-Rell  
NAME

President  
TITLE

8-18-08  
DATE



The contractor shall clearly list any personnel proposed for this task order (including employees, subcontractors and consultants) who were not part of the original proposal submitted for the basic contract award. The contractor shall identify proposed personnel status as an employee, consultant or subcontractor staff. The contractor shall include supporting documentation for newly proposed personnel. If supporting documentation has been provided under a different task order under this contract for new personnel, the contractor shall provide a statement stating so and provide the task order number and title under which supporting documentation can be found.

CAUTION - It should be noted that this request for proposal does not commit the Government to pay any costs incurred in the submission of proposals or make necessary studies or designs for the preparation thereof, nor to procure or contract for the services in the enclosed Statement of Work. It is also brought to your attention that the Contracting Officer is the only individual who can legally commit the Government to the expenditure of public funds in connection with this proposed task order.

Your response to the subject RFP should be sent electronically to [Kala.Shankar@nrc.gov](mailto:Kala.Shankar@nrc.gov) with a courtesy copy to [Vincent.Klco@nrc.gov](mailto:Vincent.Klco@nrc.gov), [Karen.Chapman@nrc.gov](mailto:Karen.Chapman@nrc.gov), and [Zahira.Cruz@nrc.gov](mailto:Zahira.Cruz@nrc.gov).

The proposal shall be signed by an official authorized to bind the company, and it shall contain a statement indicating a proposal acceptance period of not less than 30 days.

## **1.0 BACKGROUND**

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

A Standard Review Plan (SRP) (NUREG-0800) is prepared for the guidance of staff reviewers in the Office of New Reactors in performing safety reviews of applications to construct or operate nuclear power plants and the review of applications to approve standard designs and sites for nuclear power plants. The principal purpose of the SRP is to assure the quality and uniformity of staff safety reviews.

An Environmental Safety Review Plan (ESRP) (NUREG-1555) is prepared for the guidance of staff reviewers in performing environmental reviews of applications related to nuclear power plants. The ESRPs are companions to regulatory guides that address siting and environmental issues. As with NUREG-0800 the purpose of the ESRP is to assure the quality and uniformity of environmental reviews.

The staff publishes the results of these reviews in a Safety Evaluation Report (SER).

## **2.0 OBJECTIVE**

The objective of this task order is to obtain technical expertise from the contractor to assist the NRC staff in determining whether or not the subject COL application meets appropriate regulatory requirements. Specifically, technical assistance is required to assist the staff in determining the adequacy of the geotechnical site characterizations of the Fermi COL application sections 2.5.4 and 2.5.5.

**3.0 WORK REQUIREMENTS, SCHEDULE AND DELIVERABLES**

Tasks/Standards	Scheduled Completion	Deliverables
<p>1. REQUIREMENT: Become familiar with 10 CFR Part 52 (Combined Licenses), 10 CFR Part 100 (Reactor Site Criteria), section 2.5.4, and 2.5.5 of the Standard Review Plan (NUREG-0800) and Regulatory Guide 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," RG 1.132, "Site Investigations for Foundations of Nuclear Power Plants," RG 1.138, "Laboratory Investigations for Engineering Analysis and Design of Nuclear Power Plants," and RG 1.198, "Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites."</p> <p>STANDARD: Written confirmation that familiarization is complete.</p>	<p>*One week after authorization of work during COLA acceptance review</p>	<p>Documentation that assigned personnel have reviewed references</p>
<p>2. REQUIREMENT: Participate in an orientation/kick-off meeting with the NRC staff to discuss the scope of the work, expectations and contract management</p> <p>STANDARD: Attendance by individuals designated by NRC.</p>	<p>*Two weeks after authorization of work</p>	<p>N/A</p>
<p>3. REQUIREMENT: Review the COL application Section 2.5.4 and 2.5.5 to determine the adequacy of meeting the regulatory requirements and following RG guidelines. Determine if the methods and approach proposed by the applicant meet the review guidance, perform confirmatory analysis if needed. Identify issues and the need for any additional or clarifying information (requests for additional information, RAIs). Prepare a Technical Letter Report (TLR).</p> <p>STANDARD: Complete Technical Letter Report that includes RAIs and confirmatory analysis results. Follow the guidance of RAI and report requirements as described in the umbrella contract. One round of comment incorporation is acceptable.</p>		

Tasks/Standards	Scheduled Completion	Deliverables
a. About 50 percent of the Task.	*10 weeks after starting detailed COLA review as notified by the TM	Technical Letter Report and RAIs, if applicable
b. Completion of the Task.	*5 weeks after completion of task 3.a	Final RAIs
<p>4. REQUIREMENT: Review response to the RAIs to determine if the applicant has adequately resolved the outstanding issues. Identify any other open items.</p> <p>STANDARD: Complete Technical Letter Report.</p>	Three weeks after receipt of responses to the RAIs	Technical Letter Report
<p>5. REQUIREMENT: <i>(If applicable)</i> Prepare for and travel to the applicant's office and participate in an NRC review team to:</p> <p>a. Audit the Fermi site as described in the COL application to examine geotechnical features (such as natural and/or manmade slopes, dams and/or dikes, etc.) and engineering related activities, such as drilling, soil and rock sampling and storing, field and laboratory tests, soil and rock samples from borings, test pits, and trenches excavated across the site.</p> <p>b. Evaluate and discuss the applicant's responses to the unresolved issues identified in Task 4 to determine if the outstanding issues are adequately resolved.</p> <p>c. Prepare a trip report (as an input to NRC Audit Report) to summarize the information reviewed, results of the audit, and meeting discussions.</p> <p>STANDARD: Complete evaluation as defined in Task. Submit Trip Report.</p>	*Two weeks after the trip.	Trip Report

Tasks/Standards	Scheduled Completion	Deliverables
<p>6. REQUIREMENT: Review the applicant's response to the open items identified as a result of the design audit (Tasks 4 &amp; 5). Identify any unresolved issues and prepare Technical Letter Report.</p> <p>STANDARD: Complete Technical Letter Report.</p>	<p>*Three weeks after receipt of responses to the open items</p>	<p>Technical Letter Report</p>
<p>7. REQUIREMENT: As needed and requested by the staff, provide technical support to the staff during related ACRS meetings and hearing proceedings.</p> <p>STANDARD: Ensure presentation materials are reviewed and approved by NRC staff.</p>	<p>TBD</p>	<p>Prepare Presentation Materials. Attend Meetings, if required</p>

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

The Technical Monitor may issue technical instruction from time to time throughout the duration of this task order. Technical instructions must be within the general statement of work delineated in the task order and shall not constitute new assignments of work or changes of such a nature as to justify an adjustment in cost or period of performance. The contractor shall refer to Section G.1 of the base contract for further information and guidance on any technical directions issued under this task order.

Any modifications to the scope of work, cost or period of performance of this task order must be issued by the CO and will be coordinated with the NRO Project Officer.

#### **4.0 TECHNICAL AND OTHER SPECIAL QUALIFICATIONS REQUIRED**

As specified in the base contract, the contractor shall provide individuals who have the required educational background and work experience to meet the objectives of the work specified in this task order. Specific qualifications for this effort include:

- Senior Geotechnical Engineer/Consultant with broad and in deep knowledge of field and laboratory methods for identifying static and dynamic engineering properties of soil and rock, analyses of response of soil or rock to static and dynamic loadings, liquefaction potential, static and dynamic bearing capacity and settlement of soils and foundations, seismic/dynamic lateral earth pressure on foundation and wall, slope stability, and subsurface material improvement techniques.

One Senior Geotechnical Engineer/Consultant is needed for this task order.

The contractor shall provide a contractor project manager (PM) to oversee the effort and ensure the timely submittal of quality deliverables so that all information is accurate and complete as

defined in the base contract.

The NRC will rely on representations made by the contractor concerning the qualifications of the personnel assigned to this task order, including assurance that all information contained in the technical and cost proposals, including resumes, is accurate and truthful. The resume for each professional proposed to work under this task order (contractor, subcontractor, or consultant) shall describe the individual's experience in applying his or her area of engineering specialization to work in the proposed area. The use of particular personnel on this contract is subject to the NRC technical monitor's (TM's) approval. This includes any proposed changes to key personnel during the life of the task order.

## **5.0 REPORTING REQUIREMENTS**

### **Task Order Progress Report**

The contractor shall provide a bi-weekly progress report summarizing accomplishments, expenditures, contractor staff hours expended, percent completed for each task under this task order, and any problems encountered by the contractor. The report shall be sent via e-mail to the NRC TM, Task Order Project Officer (PO) and CO.

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

### **Technical reporting requirements**

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

The contractor shall provide the following deliverables in hard copy and electronic formats. The electronic format shall be provided in MS Word or other word processing software approved by the TM. For each deliverable, the contractor shall provide one hard copy and electronic copy to both the PM and the TM. The schedule for deliverables shall be contained in the approved project plan for the task order effort.

In all correspondence, include identifying information: JCN No.: **Q-4013**; Technical Assignment Control No. (TAC): **RX0468** Task Order No.: **19** the applicant: **DTE**; and, the site: **Fermi**.

1. At the completion of Task 3, submit a Technical Letter Report (TLR) that contains a list of "Requests for Additional Information (RAIs)" (see umbrella contract for the guidelines for developing RAIs) and a summary of any confirmatory analysis performed, including detailed assumptions, data used, analysis method, results and conclusions.
2. At the completion of Task 4, submit a TLR that contains a summary of the findings from the responses and resolutions of the RAIs, including a separate list of the remaining open items and the basis for such determination.

3. At the completion of Task 5, submit a trip report, as an input to NRC audit report, that contains a summary of documents audited, a summary of meeting discussion conducted with the applicant, list of outstanding issues, significance of these issues, and the basis for the conclusion.
4. At the completion of Task 6, submit a TLR that contains a summary of the findings from the responses and resolutions of the open items, and determine if there is any unresolved open item.

**6.0 MEETINGS AND TRAVEL**

One two-person, one-day working meeting to kickoff project and contractor orientation.\*

*If required*, one person, two-day trips to the applicant's facility (Tasks 5).

Two one-person, one-day working meetings at NRC headquarters to review deliverables\*

One one-person, one-day meetings, if needed, for hearing or ACRS meeting.

\*At the discretion of the NRC TM, meeting may be conducted via telephone or video conference.

**7.0 NRC FURNISHED MATERIAL**

The following NRC furnished materials will be provided to the contractor together with SOW:

- a. CD-ROM containing Fermi COLA Sections and the relevant Appendices from the application.
- b. CD-ROM containing the Final Safety Evaluation Report of the DCD.

**8.0 LEVEL OF EFFORT**

The estimated level of effort in professional staff hours apportioned among the tasks and by labor category is as follows:

Task(s)	Labor Category	Level of Effort (hours)			
		FY-08	FY-09	FY-10	FY-11
1	Sr. Geotechnical Engineer /Consultant	20			
2	Sr. Geotechnical Engineer /Consultant	15			
3	Sr. Geotechnical Engineer /Consultant		150	80	
4	Sr. Geotechnical Engineer /Consultant		75		

		Level of Effort (hours)			
5	Sr. Geotechnical Engineer /Consultant		100	70	
6	Sr. Geotechnical Engineer /Consultant			60	20
7	Sr. Geotechnical Engineer /Consultant				50
Task 1 - 7	Project Manager	20	50	20	5
Task 1 - 7	Admin Support	20	100	25	25
<b>Total</b>		75	475	255	100

## 9.0 PERIOD OF PERFORMANCE

The projected period of performance is 36 months from date of task order award.

## 10.0. OTHER APPLICABLE INFORMATION

### a. License Fee Recovery

All work under this task order is fee recoverable and must be charged to the appropriate TAC number(s).

### b. Assumptions and Understandings:

The level of effort for Task 3 is based on the assumption that the contractor is familiar with the review procedures of SRP Sections 2.5.4 and 2.5.5.

The level of effort for Task 4 is based on the assumption that there will be 50 RAIs and it will take, on the average, 2.5 hours to review and address each response.

The level of effort for Task 5 is based on two, one-person, three-day trips (including travel time) plus three days to prepare for the trips and to write the trip reports.

The level of effort for Task 6 is based on the need to resolve 15 open items and it will take, on the average, 4 hours to review and resolve each open item, and prepare a TLR.

The level of effort in Task 7 is based on requiring one trip to the site and one trip to NRC headquarters.

It is assumed that the contractor has access to the NRC furnished material available on the Internet.