

# ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 19

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

BPA NO.

1. DATE OF ORDER 4/22/06		2. CONTRACT NO. (If any) GS23F0110M		6. SHIP TO:	
3. ORDER NO. DR-04-06-078		4. REQUISITION/REFERENCE NO. RES-06-078		a. NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission Attn: Dr. Richard Lee	
5. ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Div. of Contracts Attn: Mr. Michael Mills Mail Stop T-7-I-2 Washington, DC 20555				b. STREET ADDRESS Mail Stop T10K8	
				c. CITY Washington	e. ZIP CODE 20555

7. TO:		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	

5. ACCOUNTING AND APPROPRIATION DATA 67G-15-11A-296, N7313, 252A, 31X0200 FFS No. OIP06312		10. REQUISITIONING OFFICE RES RES/DRASP	
--	--	---	--

11. BUSINESS CLASSIFICATION (Check appropriate box(es))				12. F.O.B. POINT N/A	
<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 checked="" 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) As Stated Below		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)
	<p>This delivery order for technical assistance is subject to the terms and conditions set forth under GS-23F-0110M</p> <p>Period of Performance:</p> <p>Date of award through two (2) calendar years</p> <p>Labor hour delivery Order</p> <p>All travel costs shall be in accordance with federal government travel regulations.</p> <p>Fixed Ceiling Price: \$168,352.40</p> <p>Obligated Amount: \$168,352.40</p> <p>DUNS. No. 621211259</p> <p><i>Michael Mills</i> Accepted</p> <p><i>4/26/06</i> Date</p>					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)
	21. MAIL INVOICE TO:						
	a. NAME U.S. Nuclear Regulatory Commission Division of Contracts, Mail Stop T-7-I-2						
	b. STREET ADDRESS (or P.O. Box) Refer to the attached Billing Instructions						
	c. CITY Washington	d. STATE DC	e. ZIP CODE 20555		\$168,352.4		17(i). GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature) <i>Shirley Bowen</i>	23. NAME (Typed) Donald A. King TITLE: CONTRACTING/ORDERING OFFICER
--	---

AUTHORIZED FOR LOCAL REPRODUCTION  
PREVIOUS EDITION NOT USABLE

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

TEMPLATE - ADM001

SUNSI REVIEW COMPLETE

ADM002



## **TASK ORDER TERMS AND CONDITIONS**

NOT SPECIFIED IN THE CONTRACT

### **SECTION A**

#### **CONTINUATION PAGE**

#### **SCHEDULE OF SUPPLIES OR SERVICES AND PRICE/COSTS**

##### **1 PROJECT TITLE**

The title of this project is as follows:

**NRC/Atomic energy Regulatory Board of India Standard Problem Exercises**

##### **2. BRIEF DESCRIPTION OF WORK**

The contractor shall support and perform in the joint NRC-AERB standard problem exercises on TMI-2 accident and PANDA experiment.

##### **3. SCHEDULE**

The Contractor shall provide Technical Assistance to support "and perform in the joint NRC-AERB standard problem exercises on TMI-2 accident and PANDA experiment in accordance with the Statement of Work for the delivery order period of performance at the rates as set forth below.













## **SECTION B**

### **STATEMENT OF WORK NRC/ATOMIC ENERGY REGULATORY BOARD OF INDIA STANDARD PROBLEM EXERCISES**

#### **1.0 BACKGROUND**

The Office of Nuclear Regulatory Research (RES) is supporting the NRC efforts in the United States - Indian cooperation in the field of nuclear power regulations. At the Seventh NRC-Atomic Energy Regulatory Board (AERB) of India Bilateral Meeting (March 24 through April 5, 2006) headed by Commissioner Lyons, it was agreed to by NRC and AERB to conduct two standard problem exercises involving severe accidents analysis - the TMI-2 accident and a PANDA experiment that simulates various phases of passive decay heat removal in advanced boiling water reactor containment. The next bilateral meeting will be held in the September-October 2006 time frame at NRC in Rockville, Maryland, whereby the final specifications for the standard problems will be discussed.

#### **2.0 OBJECTIVE**

To support and perform the join NRC-AERB standard problem exercises on TMI-2 accident and a PANDA experiment<sup>1</sup>

#### **3.0 SCOPE**

In cooperation with RES staff, the contractor shall perform the following tasks as follows:

##### **3.1 Preparation of the Specifications for the Standard Problems**

Contractor shall assemble information on the experimental facility (PANDA) and the plant data (TMI-2) needed to construct input decks for computer code(s) use for the analyses. Contractor shall provide the experimental data (i.e., PANDA) and the plant accident progression data (i.e., TMI-2 accident). Contractor shall propose the initial and boundary conditions for the analyses.

Deliverable: Preliminary specifications (letter report) 2 months from date of award  
Final specifications (letter report) 3 months from date of award

Estimated Completion date: 3 months from date of award

Estimated Level-of-Effort: 1 staff-month

---

<sup>1</sup> International Standard Problem 42 (PANDA Experiments) - Final Comparison and Interpretation Report (Blind Exercise) NEA/CSNI/R(2003)6

### 3.2 Standard Problem Exercises and Interactions with AERB - India

Contractor shall transmit the Specifications of the Standard Problems (Task 1) to AERB. Obtain feedback and agreed upon the final specifications to perform the analyses. Perform analyses (preliminary and final). Document analyses (draft and final). Contractor shall meet (meeting at NRC in September/October of 2006 and 2007, and at AERB - India in March/April of 2007 and 2008) with the analysts of AERB to discuss progress, and exchange information on the analyses performed by each organization.

Deliverable: preliminary calculations (9 months from date of award)  
final calculations (16 months from date of award)  
Draft report on Standard Problems Exercise (21 months from date of award)  
Final Report on Standard Problems Exercise (24 months from date of award)

Estimated Completion date: 24 months from date of award  
Estimated Level-of-Effort: 4.5 staff-months

### 3.3 Technical Support to NRC

Contractor shall participate in meetings at NRC Headquarters, and travel to India as requested by the NRC for the purpose of supporting the bi-lateral exchange between NRC and AERB of India cooperation in the field of nuclear power regulations. Tentatively, bi-annual meetings are held at NRC in September/October, and at AERB of India in March/April.

Deliverable: Letter report - As required  
Travel report - 3 weeks from completion of trip

Estimated Completion date: 24 months from date of award  
Estimated Level-of-Effort: 1 staff-month

## 4.0 MEETINGS AND TRAVEL REQUIREMENTS

For each year, three to four visits to NRC Headquarters, for one person, for 4 hours each, to meet with NRC staff, and one trip for one person to India (Mumbai), for one-week duration. Each year, the tentative bilateral meetings (and travels) between NRC and AERB - India will take place at NRC in the September/October, and at AERB - India in March/April.

## 5.0 PERIOD OF PERFORMANCE

24 months from the date of award.

## **6.0 TECHNICAL DIRECTION**

Project Officer: Dr. Richard Lee (301) 415-6795, [ryl@nrc.gov](mailto:ryl@nrc.gov)  
Division of Risk Assessment and Special Projects  
Office of Nuclear Regulatory Research  
Mail Stop T-10-K-8  
Two white Flint North  
11545 Rockville Pike  
Rockville, MD 20852

## **7.0 NRC-FURNISHED MATERIALS**

NRC will provide details on travel requirements and coordination on the NRC/AERB meeting.

## SECTION C

### C.1 2052.215-70 KEY PERSONNEL (JAN 1993)

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

[REDACTED]	Executive
[REDACTED]	Senior Engineer/Scientist
[REDACTED]	Senior Engineer/Scientist

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.

## C.2 PROJECT OFFICER AUTHORITY (FEB 2004)

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

Name: Dr. Richard Lee

Address: U.S. Nuclear Regulatory Commission  
Two White Flint North, MS T10K8  
11545 Rockville Pike  
Rockville, MD 20852

Telephone Number: 301-415-6795

(b) Performance of the work under this contract is subject to the technical direction of the NRC project officer. The term "technical direction" is defined to include the following:

(1) Technical direction to the contractor which shifts work emphasis between areas of work or tasks, authorizes travel which was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work (SOW) or changes to specific travel identified in the SOW), fills in details, or otherwise serves to accomplish the contractual SOW.

(2) Provide advice and guidance to the contractor in the preparation of drawings, specifications, or technical portions of the work description.

(3) Review and, where required by the contract, approval of technical reports, drawings, specifications, and technical information to be delivered by the contractor to the Government under the contract.

(c) Technical direction must be within the general statement of work stated in the contract. The project officer does not have the authority to and may not issue any technical direction which:

(1) Constitutes an assignment of work outside the general scope of the contract.

(2) Constitutes a change as defined in the "Changes" clause of this contract.

(3) In any way causes an increase or decrease in the total estimated contract cost, the fixed fee, if any, or the time required for contract performance.

(4) Changes any of the expressed terms, conditions, or specifications of the contract.

(5) Terminates the contract, settles any claim or dispute arising under the contract, or issues any unilateral directive whatever.

(d) All technical directions must be issued in writing by the project officer or must be confirmed by the project officer in writing within ten (10) working days after verbal issuance. A copy of the written direction must be furnished to the contracting officer. A copy of NRC Form 445, Request for Approval of Official Foreign Travel, which has received final approval from the NRC must be furnished to the contracting officer.

(e) The contractor shall proceed promptly with the performance of technical directions duly issued by the project officer in the manner prescribed by this clause and within the project officer's authority under the provisions of this clause.

(f) If, in the opinion of the contractor, any instruction or direction issued by the project officer is within one of the categories as defined in paragraph (c) of this section, the contractor may not proceed but shall notify the contracting officer in writing within five (5) working days after the receipt of any instruction or direction and shall request the contracting officer to modify the contract accordingly. Upon receiving the notification from the contractor, the contracting officer shall issue an appropriate contract modification or advise the contractor in writing that, in the contracting officer's opinion, the technical direction is within the scope of this article and does not constitute a change under the "Changes" clause.

(g) Any unauthorized commitment or direction issued by the project officer may result in an unnecessary delay in the contractor's performance and may even result in the contractor expending funds for unallowable costs under the contract.

(h) A failure of the parties to agree upon the nature of the instruction or direction or upon the contract action to be taken with respect thereto is subject to 52.233.1 . Disputes.

(i) In addition to providing technical direction as defined in paragraph (b) of the section, the project officer shall:

(1) Monitor the contractor's technical progress, including surveillance and assessment of performance, and recommend to the contracting officer changes in requirements.

(2) Assist the contractor in the resolution of technical problems encountered during performance.

(3) Review all costs requested for reimbursement by the contractor and submit to the contracting officer recommendations for approval, disapproval, or suspension of payment for supplies and services required under this contract.

(4) Assist the contractor in obtaining the badges for the contractor personnel.

(5) 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."

(6) Ensure that all contractor employees that require access to classified Restricted Data or National Security Information or matter, access to sensitive unclassified information (Safeguards, Official Use Only, and Proprietary information) access to sensitive IT systems or data, unescorted access to NRC controlled buildings/space, or unescorted access to protected and vital areas of nuclear power plants receive approval of SB/DFS prior to access in accordance with Management Directive and Handbook 12.3.

### **C.3 2052.215-77 TRAVEL APPROVALS AND REIMBURSEMENT (OCT 1999)**

(a) 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 before beginning travel.

(b) The contractor must receive written approval from the NRC Project Officer before taking travel that was unanticipated in the Schedule (i.e., travel not contemplated in the Statement of Work, or changes to specific travel identified in the Statement of Work).

(c) The contractor will be reimbursed only for those travel costs incurred that are directly related to this contract and 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 Limitations of Cost clause of this contract when, at any time, the contractor learns that travel expenses will cause the contractor to exceed the estimated costs specified in the Schedule.

(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.4 NRC Acquisition Clauses - (NRCAR) 48 CFR Ch. 20**

#### **C.5 Other Applicable Clauses**

☐ See Addendum for the following in full text (if checked)

☐ 52.216-18, Ordering

☐ 52.216-19, Order Limitations

☐ 52.216-22, Indefinite Quantity

☐ 52.217-6, Option for Increased Quantity

☐ 52.217-7, Option for Increased Quantity Separately Priced Line Item

☐ 52.217-8, Option to Extend Services

☐ 52.217-9, Option to Extend the Term of the Contract

## **C.6 SEAT BELTS**

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

## **C.7 Authority to Use Government Provided Space at NRC Headquarters**

Prior to occupying any government provided space at the NRC Headquarters in Rockville Maryland, the Contractor shall obtain written authorization to occupy specifically designated government space via the NRC Project Officer from the Chief, Space Planning and property Management Branch, Division Of Facilities and Security. Failure to obtain this prior authorization may result in one or a combination of the following remedies as deemed appropriate by the Contracting Officer.

1. Rental charge for the space occupied to be deducted from invoice amount due the Contractor
2. Removal from the space occupied
3. Contract Termination



**BILLING INSTRUCTIONS FOR  
LABOR HOUR TYPE CONTRACTS**

General: The contractor shall prepare vouchers/invoices for reimbursement of costs in the manner and format described herein or a similar format. **FAILURE TO SUBMIT VOUCHERS/INVOICES IN ACCORDANCE WITH THESE INSTRUCTIONS WILL RESULT IN REJECTION OF THE VOUCHER/INVOICE AS IMPROPER.**

Number of Copies: An original and three copies, including supporting documentation shall be submitted. A copy of all supporting documents must be attached to each copy of your voucher/invoice. Failure to submit all the required copies will result in rejection of the voucher/invoice as improper.

Designated Agency Billing Office: Vouchers/invoices shall be submitted to the following address:

U.S. Nuclear Regulatory Commission  
Division of Contracts  
Mail Stop T-7-I-2  
Washington, D.C. 20555

HAND DELIVERY OF VOUCHERS/INVOICES IS DISCOURAGED AND WILL NOT EXPEDITE PROCESSING BY NRC. However, should you choose to deliver vouchers/invoices by hand, including delivery by any express mail services or special delivery services which use a courier or other person to deliver the voucher/invoice in person to the NRC, such vouchers/invoices must be addressed to the above Designated Agency Billing Office and will only be accepted at the following location:

U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike - Mail Room  
Rockville, MD 20852

HAND-CARRIED SUBMISSIONS WILL NOT BE ACCEPTED AT OTHER THAN THE ABOVE ADDRESS.

Note that the official receipt date for hand-delivered vouchers/invoices will be the date it is received by the official agency billing office in the Division of Contracts.

Agency Payment Office: Payment will be made by the following office:

U.S. Nuclear Regulatory Commission  
Division of Accounting and Finance GOV/COMM  
Mail Stop T-9-H4  
Washington, DC 20555

Frequency: The contractor shall submit claims for reimbursement once each month, unless otherwise authorized by the Contracting Officer.

Format: Claims should be submitted in the format depicted on the attached sample form entitled "Voucher/Invoice for Purchases and Services Other Than Personal" (see Attachment ) or a similar format. **THE SAMPLE FORMAT IS PROVIDED FOR GUIDANCE ONLY AND IS NOT REQUIRED FOR SUBMISSION OF A VOUCHER/INVOICE. ALTERNATE FORMATS ARE PERMISSIBLE PROVIDED ALL REQUIREMENTS OF THE BILLING INSTRUCTIONS ARE ADDRESSED.**

Billing of Costs After Expiration of Contract: If the costs are incurred during the contract period and claimed after the contract has expired, the period during which these costs were incurred must be cited. To be considered a proper voucher/invoice, the contractor shall clearly mark it "EXPIRATION VOUCHER" OR "EXPIRATION INVOICE".

Currency: Billings may be expressed in the currency normally used by the contractor in maintaining his accounting records; payments will be made in that currency. However, the U.S. dollar equivalent for all vouchers/invoices paid under the contract may not exceed the total U.S. dollars authorized in the contract.

ATTACHMENT

**INVOICE/VOUCHER FOR PURCHASES  
AND  
SERVICES OTHER THAN PERSONAL**

**(SAMPLE FORMAT - COVER SHEET)**

Official Agency/Billing Office

U.S. Nuclear Regulatory Commission

Division of Contracts

Mail Stop: T-7-12

Washington, DC 20555-0001

(a) Contract No: \_\_\_\_\_

(b) Voucher/Invoice No: \_\_\_\_\_

(c) Date of Voucher/Invoice: \_\_\_\_\_

Payee's Name and Address

(d) Individual to Contact Regarding Voucher/Invoice

Name: \_\_\_\_\_

Telephone No: \_\_\_\_\_

(e) This voucher/invoice represents reimbursable costs for the billing period

\_\_\_\_\_ to \_\_\_\_\_

	<u>Current Period</u>	<u>Amount Billed</u> <u>Cumulative</u>
(f) <u>Direct Costs:</u>		
(1) Direct Labor*	\$ _____	\$ _____
(2) Travel*	\$ _____	\$ _____
Total Direct Costs:	\$ _____	\$ _____

\* The contractor shall submit as an attachment to its invoice/voucher cover sheet a listing of labor categories, hours billed, fixed hourly rates, total dollars, and cumulative hours billed to date under each labor category, authorized under the contract. In addition, the contractor shall include travel costs incurred with the required supporting documentation, as well as, the cumulative total of travel costs billed to date by activity.