

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 1

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

1 DATE OF ORDER 1/19/2000	2 CONTRACT NO. (If any)	6 SHIP TO
3 ORDER NO. DR-00-0079	4 REQUISITION/REFERENCE NO. 60080004	a NAME OF CONSIGNEE U.S. Nuclear Regulatory Commission Office of Nuclear Regulatory Research
5 ISSUING OFFICE (Address correspondence to) U.S. Nuclear Regulatory Commission Division of Contracts and Property Mgt. Attn: Yvette Brown - Mail Stop T-7-12 Contract Management Branch 2 Washington DC 20555	b STREET ADDRESS ATTN: Sudhamay Basu Mail Stop - T-10 K8	c CITY Washington
	d STATE DC	e ZIP CODE 20555
	f SHIP VIA	

a NAME OF CONTRACTOR BOARD OF REGENTS OF UNIVERSITY OF WISCON	8 TYPE OF ORDER ☒ a PURCHASE ORDER Reference your proposal 80903 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	☐ b DELIVERY/TASK ORDER Except for billing instructions on the reverse this delivery/task order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.
b COMPANY NAME ATTN: Cheryl Gest Administrative Officer		
c STREET ADDRESS 750 University Avenue		
d CITY Madison	e STATE WI	f ZIP CODE 53706

9 ACCOUNTING AND APPROPRIATION DATA JOB CODE: Y6232 B&R NO. 06015110125 BOC: 252A FUND SOURCE: 31X0200.060 Obligation Amount: \$30,000.00	10 REQUISITIONING OFFICE Office of Nuclear Regulatory Research
11 BUSINESS CLASSIFICATION (Check appropriate box(es)) a SMALL ☒ b OTHER THAN SMALL ☐ c DISADVANTAGED ☐ d WOMEN-OWNED ☐	
12 FOB POINT Destination	14 GOVERNMENT BILLING ☐ 15 DELIVER TO FOB POINT ☐ 16 DISCOUNT TERMS ☐
13 PLACE OF 17 SCHEDULE (See reverse for Rejections)	
18 INSPECTION ☐ 19 ACCEPTANCE ☐	1/18/2000-1/17/2001 Net 30

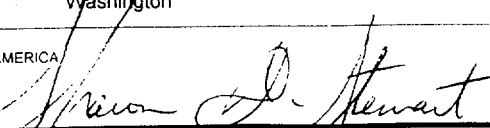
ITEM NO. (A)	SUPPLIES OR SERVICES (B)	QUANTITY ORDERED (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)	QUANTITY ACCEPTED (G)
-----------------	-----------------------------	----------------------------	-------------	----------------------	---------------	-----------------------------

The contractor shall provide the U.S. Nuclear Regulatory Commission technical assistance in accordance with the attached Statement of Work and the Board of Regents of the University of Wisconsin proposal 80903 dated 1/5/00, for the period beginning January 18, 2000 through January 17, 2001.

Principal Investigator: Michael Corradini - 608-265-2001

NRC Project Officer: Sudhamay Basu - 301-415-6774

The fixed price for this effort is \$30,000.00.

18 SHIPPING POINT	19 GROSS SHIPPING WEIGHT	20 INVOICE NO	SUBTOTAL
21 MAIL INVOICE TO			17(h) TOTAL (Cont. pages)
a NAME U.S. Nuclear Regulatory Commission Office of the Chief Financial Officer			17(i) GRAND TOTAL
b STREET ADDRESS (or P.O. Box) Attn: GOV/COM Acctng. Section T-9H4 (submit invoice in duplicate)			\$30,000.00
c CITY Washington	d STATE DC	e ZIP CODE 20555	
22 UNITED STATES OF AMERICA BY (Signature) 	23 NAME (Typed) Sharon D. Stewart		
TITLE: CONTRACTING/ORDERING OFFICER			

**STATEMENT OF WORK FOR UNIVERSITY OF WISCONSIN
PURCHASE ORDER NO. 60-080004**

TITLE: Technical Support for Molten Fuel Coolant Interactions Research

I. BACKGROUND

The University of Wisconsin (UW) is completing an Office of Research (RES) funded contract on fuel-coolant interaction (FCI) research, which has provided experimental data to determine the enveloping conditions for occurrence of an energetic FCI and to estimate the energetics. The data has been used to develop and assess analytical models in the FCI codes. The codes are generally considered "fit-for-purpose" for some applications; however, for other applications (e.g., estimate of shock loading of the lower head, localized damage of cavity structures, etc.), better code accuracy and predictability are demanded. To meet the demand, it is necessary to have better measurements of spatial and temporal distributions of coarse breakup and fine fragmentation. Once developed, the successful measurement technique can be applied to other experimental programs on FCI and debris coolability.

II. OBJECTIVE

The objective of this work is to provide technical support in the development of instrumentation for measuring fuel-coolant mixing in order to better quantify coarse breakup and fine fragmentation. This type of quantification is necessary to achieve better predictability of analytical tools for fuel-coolant interactions calculations.

III. TECHNICAL AND OTHER QUALIFICATIONS REQUIRED

For successful performance of the work, the Principal Investigator should be an individual with qualifications and experience in FCI and related research areas. This individual should also have experience in directing experimental research and should have access to a team of research professionals and students.

IV. SCOPE OF WORK

Perform experiments with simulants at the WFCI facility to verify the capability of X-ray imaging technique to map the fuel-coolant mixing regions, to extract quantitative data from the maps, and to correlate the data for characterizing coarse breakup and fine fragmentation. Once the imaging capability is verified with simulants, provide necessary technical assistance to other organizations involved in FCI experimental research in the application of the technology to prototypic materials. When called upon, provide expert assistance on other FCI-related issues to the NRC staff.

PO 60-080004 (cont'd)

V. PERIOD OF PERFORMANCE

This purchase order is for a period of twelve months.

VI. MEETINGS AND TRAVEL

At present, no travel (domestic or foreign) is anticipated. If it is found that travel is required to perform a specific assignment, it shall be coordinated with and approved in advance by the NRC Project Officer.

VII. NRC FURNISHED MATERIAL

None required.

VIII. DELIVERABLES AND SCHEDULE

The contractor shall submit a topical report at the conclusion of work, summarizing the results. Additionally, the contractor shall submit periodic progress reports accompanying each invoice. The progress reports will summarize technical progress made to date and provide a detailed explanation of expenses incurred.

IX. NRC PROJECT OFFICER

The NRC Project Officer is Sudhamay Basu, (301)415-6774, mail stop T-10 K8.

TERMS AND CONDITIONS

(APPLICABLE TO OPEN MARKET NON-COMMERCIAL SIMPLIFIED ACQUISITIONS)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make the full text available. (Clauses which are not applicable are self-deleting.)

The following terms and conditions apply to all purchase orders:

- 52.203-3 Gratuities (APR 84)
- 52.211-16 Variation in Quantity (APR 84)
- 52.213-3 Notice to Supplier (APR 84)
- 52.222-3 Convict Labor (AUG 96) (unless precluded by FAR Subpart 22.2)
- 52.222-36 Affirmative Action for Handicapped Workers (APR 84)*
- 52.223-6 Drug-Free Workplace (JAN 97)
(Applicable to purchase orders with individuals valued up to the simplified acquisition threshold)
- 52.232-1 Payments (APR 84)
- 52.232-8 Discounts for Prompt Payment (MAY 97)
- 52.232-23 Assignment of Claims (JAN 86)
- 52.232-25 Prompt Payment (MAY 97)
- 52.232-33 Mandatory Information for Electronic Funds Transfer Payment (AUG 96)
- 52.233-1 Disputes Alternate I (OCT 95)
- 52.233-3 Protest after Award (AUG 96)
- 52.242-10 F.O.B. Origin--Government Bill of Lading or Prepaid Postage (APR 84)
- 52.244-6 Subcontracts for Commercial Items and Commercial Components (OCT 95)
- 52.246-1 Contractor Inspection Requirements (APR 84)
- 52.247-29 F.O.B. Origin (JUN 88)
- 52.247-34 F.O.B. Destination (NOV 91)
- 52.249-8 Default (Fixed Price Supply and Service) (APR 84)

NRC Acquisition Clauses - 48 CFR 20

- 2052.209-73 Contractor Organizational Conflict of Interest
- 2052.210-70 Brand Name Products or Equal

Additional Terms and Conditions Applicable to All Purchase Orders for Supplies

- 52.225-1 Buy American Certification (DEC 89)
- 52.225-3 Buy American Act--Supplies (JAN 94)
- 52.243-1 Changes--Fixed Price (AUG 87)

- 52.249-1 Termination for Convenience of the Government (Fixed Price) (Short Form) (APR 84)
- 52.222-20 Walsh-Healey Public Contracts Act (APR 84)*
- 52.222-21 Certification of Nonsegregated Facilities (FEB 84)*
- 52.222-25 Affirmative Action Compliance (FEB 84)
- 52.222-26 Equal Opportunity (APR 84)
- 52.222-35 Affirmative Action for Special Disabled and Vietnam Era Veterans (APR 84)*
- 52.222-37 Employment Records on Special Disabled Veterans and Veterans of the Vietnam Era (JAN 88)

Additional Terms and Conditions Applicable to Purchase Orders for Services

- 52.222-41 Service Contract Act of 1965, as Amended (MAY 89)
- 52.222-42 Statement of Equivalent Rates for Federal Hires (MAY 89) (Applicable to purchase orders valued in excess of \$2,500)
- 52.237-1 Site Visit (APR 84)
- 52.237-2 Protection of Government Buildings, Equipment and Vegetation (APR 84)
- 52.243-1 Changes--Fixed Price (AUG 87)
Alternate I
(Alternate II & IV, whichever is applicable)
- 52.249-4 Termination for Convenience of the Government (Services) (Short Form) (APR 84)

Additional Terms and Conditions Applicable to Construction Purchase Orders valued in excess of \$2,000

- 52.222-6 Davis-Bacon Act (FEB 95)
- 52.222-12 Contract Termination--Debarment (FEB 88)
- 52.222-13 Compliance with Davis-Bacon and Related Act Regulations (FEB 88)
- 52.222-14 Disputes Concerning Labor Standards (FEB 88)
- 52.222-15 Certification of Eligibility (FEB 88)

*Applicable to purchase orders valued in excess of \$10,000

The following attachments are only applicable to vendors not currently receiving electronic payments authorized by the NRC.

Attachments:

1. Electronic Payment
2. ACH Standard Form 3881

Electronic Payment

The Debt Collection Improvement Act of 1996 requires that all payments except IRS tax refunds be made by Electronic Funds Transfer. It is the policy of the Nuclear Regulatory Commission to pay vendors by the Automated Clearing House (ACH) electronic funds transfer payment system. The electronic system is known as Vendor Express. Payment shall be made in accordance with FAR 52.232-33, entitled "Mandatory Information for Electronic Funds Transfer Payment."

To receive payment, the contractor shall complete the "Company Information" portion of the Standard Form 3881, entitled "ACH Vendor/Miscellaneous Payment Enrollment Form" found in Section J. The contractor shall take the form to the ACH Coordinator at the financial institution that maintains its company's bank account. **The contractor shall discuss with the ACH Coordinator how the payment identification information (addendum record) will be passed to them once the payment is received by the financial institution. To ensure that adequate payment information will be available to the contractor, the contractor should inform the financial institution that the addendum record must not be stripped from the payment.** Further information concerning the addendum is provided on page 2 of this attachment. The ACH Coordinator should fill out the "Financial Institution Information" portion of the form and return it to the Office of the Controller at the following address: Nuclear Regulatory Commission, Division of Accounting and Finance, Financial Operations Section, Mail Stop T-9-H-4, Washington, DC 20555. ATTN: ACH/Vendor Express. It is the responsibility of the contractor to ensure that the financial institution returns the completed form to the above cited NRC address. If the contractor can provide the financial information, signature of the financial institution's ACH Coordinator is not required. The NRC is under no obligation to send reminders. Only after the Office of the Controller has processed the contractor's sign-up form will the contractor be eligible to receive payments.

Once electronic funds transfer is established for payments authorized by NRC, the contractor needs to submit an additional SF 3881 only to report changes to the information supplied.

Questions concerning ACH/Vendor Express should be directed to the Financial Operations staff at (301) 415-7520.