

Approved by: James Siegrist	Account no.: PI # Z3MCC5	Amount of Transaction: \$760,000.00	Stat. Code:	Req. No. 0000781193
Submit correspondence to Subcontract Administrator FAX: (510) 486-5548		DPAS Rating (15 CFR Part 700):		From Receipt of goods or invoice whichever is later. 0 - 1/2% 10h & 25h 1 - 1/2% 10 days C - 1% 10h & 25h 2 - 1% 10 days 9 - 1% 10th prox. 7 - Net 30 days J - Net 01 L - Net 15
Subcontract Administrator: Eileen Nasto Phone: 510-486-4535	Code: EN	Subcontract No.: 6806258	Seller Code:	Terms: 7
				3 - 1% 30 Days F - 2% 10h & 25h 5 - 2% 10 days H - 2% 20 days 6 - 2% 30 days 8 - As Shown K - Net 10 M - Net 20

To:  
Wang NMR, Inc.  
550 North Canyons Parkway  
Livermore, CA 94550

University of California Ernest Orlando Lawrence  
Berkeley National Laboratory  
One Cyclotron Rd., Mail Stop 937-200  
Berkeley, CA 94720

Ship to: CCLRC Rutherford Appleton  
Laboratory  
Attn: Dr. Paul Drumm  
Chilton, Didcot  
Oxon, United Kingdom  
OX11 0QX

**FIRM FIXED PRICE**  
**SUBCONTRACT # 6806258**  
For Contract No. DE-AC02-05CH11231  
with the Department of Energy

MAIL INVOICE IN DUPLICATE TO:  
University of California Ernest Orlando  
Lawrence Berkeley National Laboratory  
Accounting Office  
SC # TBD  
P.O. Box 528  
Berkeley, CA 94701

FOR RESALE: - State Sales Tax should not be charged, as the University holds State Sales Tax Permit SR CH 21-835970 for deliveries to University of California Ernest Orlando Lawrence Berkeley National Laboratory.

Ship Via: (as coded) <b>0</b>	Transportation Terms (as coded) <b>1</b>	F.O.B. (as coded) <b>2</b>
1. Pickup 2. Parcel Post 3. UPS 4. Federal Exp. 1 5. Motor Freight 6. Air Freight 7. Air Parcel Post 8. Federal Exp. 2 9. Air Frt. Forwarder 0. See Body of Order	1. Account of University 2. Account of Subcontractor Prepaid 3. See Body of Order Shipping Point: - Livermore, CA	1. Destination 2. Shipping Point 3. Shipping Point, Freight Allowed 4. See Body of Order

**ARTICLE I – PURPOSE**

- A. This is a fixed price subcontract for the design, fabrication, assembly and testing of two (2) MICE Spectrometer Solenoid Magnets as further described herein.
- B. Wang NMR, Inc. herein and in attachments hereto called "Seller" or "Subcontractor," agrees to furnish to the University of California Ernest Orlando Lawrence Berkeley National Laboratory, herein and in attachments hereto called "University," "Berkeley Lab," "LBL," and "LBNL," the following in strict accordance with the terms, conditions, and provisions of this Subcontract, herein and in attachments hereto called "Order" or "Subcontract".

**ARTICLE II – SCOPE OF WORK**

- A. The Subcontractor shall provide all materials and perform all work in accordance with this Subcontract, including Technical Specification, MICE Spectrometer Solenoid Magnets, #10154.
- B. The Subcontractor shall furnish all personnel, supervision, materials, supplies, equipment, tools, facilities, transportation, testing, and other incidental items and services necessary for performance of the work, except for Government Property identified in this Subcontract to be furnished by the

University. The Subcontractor shall deliver the materials, products, supplies, reports and residuals, as specified.

- C. Acceptance of the work under this Subcontract shall be based on the Subcontractor's performance and completion of the work in compliance with the requirements specified in this Subcontract. Final acceptance will be performed at Rutherford Appleton Laboratory, Chilton, Didcot, Oxon, United Kingdom.

### ARTICLE III – PRICE & DELIVERY

Item	Qty.	Description	Delivery	Total Price
1	2	MICE Spectrometer Solenoid Magnets in accordance with this subcontract and incorporated documents	15 Months After Receipt of Order (ARO)	\$760,000.00
		Total Fixed Price		\$760,000.00

### ARTICLE IV – MILESTONE PAYMENTS

The Subcontractor shall submit an invoice upon completion of each milestone in accordance with the payment schedule shown below. The University will verify completion of each milestone. Title shall vest in the Government immediately upon the subcontractor's receipt of the milestone payment.

#### **PAYMENT SCHEDULE**

<u>Milestone No.</u>	<u>Description</u>	<u>Payment</u>	<u>Estimated Completion Date</u>
1	Engineering Design, Computation, Analyses and Design Review & Drawings	\$30,000.00	10-12 Weeks ARO
2	Fabricate Coil Bobbin & Coil Insulation, Coil Winding, Coil Assembly and Assembly Coil Quench Protection	\$300,000.00	24-30 Weeks After Milestone 1
3	Procure Cryostat Components and Fabricate Cryostat Subassembly	\$110,000.00	16 Weeks After Milestone 1

4	Procure Hi-Tc Lead & Power Lead, Vacuum Feed for both 300K to 77K, Fabricate Superconducting Vacuum Feedthrough	\$60,000.00	16 Weeks After Milestone 1
5	Procure cernox Sensors & its Readouts and Liquid Helium level Sensors & its Readouts	\$30,000.00	8 Weeks After Milestone 1
6	Fabricate Cryo-cooler Interface and Recondensers	\$40,000.00	8 Weeks After Milestone 1
7	Procure & Fabricate Cold Mass Suspension Systems	\$35,000.00	8 Weeks After Milestone 1
8	Fabricate Support Stands, Assembly Cryostat, Hi-Tc Leads, Cold Mass Suspension System, and Instrumentation Sensor	\$120,000.00	14-16 Weeks After Milestone 2
9	Test Magnets, Final Acceptance by LBNL	\$35,000.00	8 Weeks After Milestone 8

**ARTICLE V – SHIPPING**

Subcontractor shall notify the University Procurement Representative four weeks prior to shipment to obtain detailed shipping instructions.

**ARTICLE VI – INVOICING**

Subcontractor shall submit invoices in duplicate to the following:

University of California  
Lawrence Berkeley National Laboratory  
Accounting Office  
P.O. Box 528  
Berkeley, CA 94701

Only those items identified in the Subcontract or subsequent written, approved change orders, including attachments to either will be paid. Unidentified or inadequately identified charges will not be paid. Services will not be paid for unless requested by those specifically identified in the Coordinators article.

State Sales Tax shall not be charged under this Subcontract as the University holds California State Resale Certificate SR-CH21-835970.

## **ARTICLE VII – UNIVERSITY FURNISHED GOVERNMENT PROPERTY**

The University will furnish the following Government Property for use under this Subcontract.

<b>Quantity</b>	<b>Description</b>	<b>Estimated Delivery to Subcontractor's Dock</b>
As Required	Nb-Ti Superconducting Wire	As Required to Support Delivery
As Required	Cryo-Coolers P/N TBD	As Required to Support Delivery
As Required	Power Supply P/N TBD	As Required to Support Delivery

The property listed upon will be incorporated into the deliverable items. The University does not anticipate any residual property at the conclusion on the subcontract. All property furnished by the University under this Subcontract shall be used only for performance of this Subcontract and shall be identified, utilized, accounted for, and dispositioned in accordance with the *GOVERNMENT PROPERTY* clause of the GENERAL PROVISIONS.

## **ARTICLE VIII – COORDINATION AND ADMINISTRATION**

- A. The University Procurement Representative for this Subcontract is Eileen Nasto, telephone (510) 486-4535 or a designee. All matters relating to the non-technical interpretation, administration, and performance of this Subcontract shall be reserved to the University Procurement Representative.
- B. The University Technical Representative under this Subcontract is Steve Virostek, telephone (510) 486-6271 or a designee, who shall represent the University in matters relating to the technical performance of the Scope of Work described herein. The University Technical Representative shall interpret the technical requirements of the Scope of Work and determine the emphasis and direction of the Subcontractor in the conduct of the work.

## **ARTICLE IX – TECHNICAL DIRECTION AND CHANGES**

- A. Performance of the work under this Subcontract shall be subject to the technical direction of the University Technical Representative. The term “technical direction” is defined to include, without limitation:
  - 1. Provision of written information to the Subcontractor which assists in the interpretation of drawings, specifications, or technical portions of the work description; and
  - 2. Review and, where required by the Subcontract, approval of technical reports, drawings, specifications, and information to be delivered by the Subcontractor to the University under the Subcontract.
- B. All technical direction must be within the Scope of Work stated in the Subcontract and shall be issued in writing by the University Technical Representative.
- C. The Subcontractor shall proceed promptly with the performance of technical direction of the nature prescribed by this section issued by the University Technical Representative.

- D. The University Technical Representative is not authorized to issue, and the Subcontractor shall not comply with, any technical direction, which would:
1. Constitute a change within the general Scope of Work, affecting the description of the work to be performed (including applicable drawings, designs, and specifications), the time of performance, or the place of performance;
  2. Constitute an assignment of work outside the general Scope of Work covered by this Subcontract;
  3. Increase the price for performance of the work or the time required for performance of the work;
  4. Change any expressed term or condition of the Subcontract; or
  5. Unreasonably interfere with the Subcontractor's ability to perform and complete the work, as required under the Subcontract.

Any such technical direction must first be authorized by a written modification to this Subcontract issued by the University Procurement Representative, as provided in the *CHANGES* clause of the GENERAL PROVISIONS.

- E. If any instruction or direction by the University Technical Representative falls within one of the types described in paragraph D, above, the Subcontractor shall not proceed, shall promptly notify the University Procurement Representative in writing, and shall request the University Procurement Representative to modify the Subcontract accordingly.

Upon receipt of the notification from the Subcontractor, the University Procurement Representative shall promptly:

1. Advise the Subcontractor in writing that the technical direction is within the scope of the Subcontract effort and does not constitute a change under *CHANGES* clause, or
2. Issue a written modification.

#### **ARTICLE X – APPROVAL OF TECHNICAL DATA**

- A. If this Subcontract requires the Subcontractor to furnish any drawings, specifications, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance or test data, or other technical data for approval by the University prior to Subcontractor performance, the approval of the data by the University shall not relieve the Subcontractor from responsibility for any errors or omissions in such data or from responsibility for complying with the requirements of this Subcontract, except as specified below. Any work done prior to such approval shall be at the Subcontractor's risk.
- B. If the data include any variations from the Subcontract requirements, the Subcontractor shall describe such variations in writing at the time of submission of the data. If the University approves any such

variation(s), a change order to the Subcontract shall be issued by the University and, if appropriate, a bilateral modification to the Subcontract shall be negotiated.

#### **ARTICLE XI – PRELIMINARY INSPECTION**

Preliminary in-process and source inspections may be performed at the Subcontractor's facility or at any of its sub-tier subcontractors' plants. The inspection shall allow the University to verify that the Subcontractor has met the requirements of this Subcontract. Prior to University inspection, the Subcontractor shall perform a complete inspection and document the results. The Subcontractor shall present this documentation to the University at the time of the preliminary inspection. Such preliminary inspection does not waive the right of the University to inspect and accept or reject at the destination.

#### **ARTICLE XII - OBSERVATION AT THE SUBCONTRACTOR'S FACILITIES**

The University reserves the right to observe and witness all phases of the manufacturing of the Supplies, including design, fabrication, assembly, testing, and inspection, conducted at the Subcontractor's plant or at any of its sub-tier subcontractors' plants.

#### **ARTICLE XIII - INSPECTION BY A THIRD PARTY**

The University reserves the right to subcontract with a qualified third party to conduct on its behalf any or all of the University inspections.

#### **ARTICLE XIV – DELETIONS TO GENERAL PROVISIONS**

The following clause is hereby deleted from the General Provisions for Commercial Supplies and Services:

FAR 52.225-1, Buy American Act – Supplies (Jun 2003)

#### **ARTICLE XV – INCORPORATED DOCUMENTS**

In addition to the terms and conditions contained herein, the provisions or articles listed below and attached hereto, are made a part of this order and are equally binding.

1. General Provisions for Commercial Supplies And Services (1/09/2006).
2. Technical Specification, MICE Spectrometer Solenoid Magnets, #10154 dated 3/23/06

**SIGNATURES**

IN WITNESS WHEREOF, the parties hereto have executed this Subcontract No. 6806258.

AUTHORIZED: University of California  
Ernest Orlando Lawrence  
Berkeley National Laboratory  
\_\_\_\_\_

ACCEPTED: \_\_\_\_\_

SIGNED: Eileen Nasto

SIGNED: \_\_\_\_\_

NAME: Eileen Nasto  
\_\_\_\_\_

NAME: \_\_\_\_\_

TITLE: please print  
Fabrication & One Time Purchase  
Manager  
\_\_\_\_\_

TITLE: please print  
\_\_\_\_\_

DATE: 6-15-06  
\_\_\_\_\_

DATE: \_\_\_\_\_