

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	Page of Pages <b>1</b> of <b>4</b>
2. AMENDMENT/MODIFICATION NO. <b>002</b>	3. EFFECTIVE DATE <b>August 6, 1999</b>	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY <b>Bureau of Reclamation Lower Colorado Region P.O. Box 61470 Boulder City NV 89006-1470</b>	CODE <b><a href="http://www.lc.usbr.gov/~g3100/">http://www.lc.usbr.gov/~g3100/</a></b>	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State, and ZIP code)		(T) T	9A. AMENDMENT OF SOLICITATION NO. <b>99-SQ-30-0007</b>
			9B. DATED (SEE ITEM 11) <b>July 12, 1999</b>
			10A. MODIFICATION OF CONTRACT/ORDER NO.
			10B. DATED (SEE ITEM 13)
CODE	FACILITY CODE		

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [ ] is extended, [ X ] is not extended.

Offerors must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:  
 (a) By completing Items 8 and 15, and returning 1 copy of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (if required)

**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(T)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT/ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. **IMPORTANT:** Contractor [ ] is not [ ] is required to sign and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible)

**Project Title:** Armature Winding for Generator Units 1, 2, and 3 at Headgate Rock Powerplant, BIA, Arizona.

**Purpose of Amendment:** The purpose of this amendment is to (1) make a minor change to the specifications.

**Receipt of Quotes:** The date, time and receipt of quotes remains August 13, 1999, no later than 3 p.m., local time, at the Bureau of Reclamation, Lower Colorado Regional Office, Boulder City, Nevada (see block 9 of the "Solicitation/Contract/Order for Commercial Items," Standard Form 1449).

**Acknowledgment:** See block 11 above regarding how to acknowledge this amendment. The acknowledgment must be received at the place designated for receipt of quotes (see block 9 of the "Solicitation/Contract/Order for Commercial Items," Standard Form 1449).

**Quote Modification:** See block 11 above if you have submitted your quote and now desire to modify it or withdraw it.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
_____ (Signature of person authorized to sign)		BY _____ (Signature of Contracting Officer)	

Description of the Change:

1. In Part III - Statement of Work, on page 53, paragraph 3.03(f) Installation, the tolerance of the feeler gauge is revised from "0.002 inch" to "0.004 inch."

***Instructions:***

**Remove**

Pages 53 and 54

**Replace with Revised**

Pages 53 and 54

supplement or replace Government-furnished wedges and slot material shall be provided as needed.

e. Materials -

1. Wedges shall be made from glass mat base laminate NEMA grade G-10, G-11 or better. All materials in the stator slot shall have class "F" rating. The wedges at the ends of the slot shall be of the locking type. Adhesive may be used: Provided, that the air vents are not blocked after the wedges are installed. As an alternate to the single-piece wedge, the Contractor will be permitted to furnish and install two-part, radial-pressure-type wedges: Provided, that the wedges are constructed with a positive means of measuring the amount of spring compression.

At least one wedge in each slot shall be installed with appropriately located gauging holes to provide a positive means of measuring the actual amount of spring compression.

2. Slot fillers - Slot filler strips and slot side fillers shall be fabricated from semiconducting material except the front filler strip may be constructed of non-conducting material. All materials in the stator slot shall have class "F" rating. The spring-type wedge filler material may be constructed of nonconducting material.

f. Installation - Flat filler strips of semiconducting material shall be installed at the bottom of the slot, between coils where no RTD is required and between the top coil in each slot and the spring-type wedge filler material. Side filler strips shall be tight within the slot so that a ~~0.002~~ **0.004** inch feeler gauge will not enter any gap between the coil and slot sides. The ~~0.002~~ **0.004** inch feeler gage "no-go" standard shall apply to at least 90 percent of the stacked core length; provided the remaining 10 percent has "go" lengths of less than 3 inches. For at least 90 percent of the machine, only one thickness of side filler shall be used and on the remaining 10 percent only two thicknesses glued together shall be used.

%  
%

Spring-type wedge filler materials or other Contracting Officer-approved spring system shall be furnished and installed directly behind the wedges for providing a positive radial force on the coils. The spring compression shall be at least 150 percent of the maximum radial electromagnetic forces produced on the coils. Additionally, the amount of spring compression shall be at least 150 percent of the total amount of radial decrease of materials in the slot due to shrinkage or relaxation for the expected life of the armature winding.

The Contractor shall furnish all gauges and any other equipment required to determine the total spring compression and shall furnish instruction for using the gauges during installation and during future maintenance inspections. Care shall be exercised that blocking of the air passages cannot occur.

g. Cost. - The cost for furnishing and installing the wedges and slot filler materials as well as spring compression gauges shall be included in the lump-sum prices bid in the schedule to install the three separate windings, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.

### 3.04 Indicating and Protective Devices

a. General - The Contractor shall furnish and install in each generator, 28 Resistance Temperature Detectors (RTDs). The RTDs shall be located in slots which will, as closely as possible, indicate the highest temperature obtained in operation. The RTDs will be connected to the existing terminal board by the Contractor.

b. References:

ANSI C50.10 - 1990 - General Requirements for Synchronous Machines  
IEEE 119 - 1974 - Recommended Practice for General Principles of Temperature Measurement as Applied to Electrical Apparatus

c. Submittals - Submittals shall be in accordance with this subparagraph, paragraph 1.03 (Submittal Requirements) and 1.04 (Drawings and Data to be Furnished by the Contractor).

1. Approval drawings and data showing plan and sectional views of the RTDs, and a tabulated listing of RTDs and the slots they are located in.

2. Test reports.

d. Materials - The RTD's shall be standard 10-ohm-copper, 3-conductor, resistance temperature detectors. The copper detectors shall have a temperature coefficient of resistance of between 0.003830 and 0.003890 at a reference temperature of 25°C. The sensing element shall be encapsulated in a flexible heat-cured compound throughout the entire slot portion and for a short distance past the end of the slot. The leads shall be encapsulated in the same material or protected with acrylic resin-coated fiberglass sleeving.

The necessary wiring between the existing terminal board and the individual temperature detectors shall be provided and installed. The wiring shall comprise a 3-conductor, shielded cable which is oil, moisture, and heat resistant. The cable shall have armor protection against mechanical damage. The conductors shall be stranded, tinned, copper with an insulation system capable of operating at a temperature of at least 125EC. The shield of the conductor shall be grounded at one end.

e. Installation - The Contractor shall furnish and install two RTDs per parallel per phase in the armature winding located so as to indicate, as closely as possible, the highest temperature obtained in operation, with the remaining four RTDs spaced equally around the winding.

f. Testing - The required accuracy tests for the RTDs are described in paragraph 4.02 (Factory Tests)

g. Payment - Payment for furnishing, testing, and installing the RTDs shall be made at the applicable lump-sum price bid therefore in the schedule, which price shall include the cost of all labor and materials necessary to perform the work required by this paragraph.