

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE OF PAGES 1   5
2. AMENDMENT/MODIFICATION NO. 000001	3. EFFECTIVE DATE 08/17/2010	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable) PCN: 98701.1
6. ISSUED BY NASA/John F. Kennedy Space Center Office of Procurement MAIL CODE OP KENNEDY SPACE CENTER FL 32899	CODE KSC	7. ADMINISTERED BY (If other than Item 6) NASA/Kennedy Space Center Office of Procurement MAIL CODE OP KENNEDY SPACE CENTER FL 32899	CODE KSC
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(x) 9A. AMENDMENT OF SOLICITATION NO. NNK10347550E	9B. DATED (SEE ITEM 11) 07/23/2010
CODE		10A. MODIFICATION OF CONTRACT/ORDER NO.	
FACILITY CODE		10B. DATED (SEE ITEM 13)	

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,  is not extended.  
 Offers 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 copies 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 ACKNOWLEDGEMENT 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 ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	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 this document and return \_\_\_\_\_ copies to the issuing office.

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

See SF30 Block 14 Continuation pages for Amendment description.

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) Tyrone Frey	
15B. CONTRACTOR/OFFEROR   (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA   (Signature of Contracting Officer)	16C. DATE SIGNED

SF 30 Block 14 Continuation

This amendment to the Solicitation is issued to provide amend the technical specification accordingly and the Government's response to questions/comments received in accordance with Solicitation Section L.13, Communication Regarding the Solicitation.

Section 1 Amend Technical Specification 245GCM00001

1. Reference: Page 173, Section 23 64 00.00 10, section 2.4.1, 3<sup>rd</sup> sentence.  
**Delete:** Chiller shall have a minimum full load EER rating of 9.4.  
**Replace with:** Chiller shall have a minimum full load EER rating of 9.8.
2. Reference: Page 174, Section 23 64 00.00 10, section 2.5.3, 3<sup>rd</sup> sentence.  
**Delete:** filter and drier, combination sight glass and moisture indicator, and superheat adjustment.
3. Reference: Page 178, Section 23 64 00.00 10, section 2.7.1, last sentence.  
**Delete:** Stable operation at minimum load of 10 percent of total capacity shall be demonstrated during the factory test.  
**Replace with:** Stable operation at minimum load of 25 percent of total capacity shall be demonstrated during the factory test.
4. Reference: Page 176, Section 23 64 00.00 10, section 2.5.7, last sentence.  
**Delete:** Performance shall be based on a water velocity not less than 3 fps nor more than 12 fps and a fouling factor of 0.0005 h(ft<sup>2</sup>) degrees F /BTU.  
**Replace with:** Performance shall be based on a water velocity not less than 3 fps nor more than 12 fps and a fouling factor of 0.0001 h(ft<sup>2</sup>) degrees F /BTU.

Section 2 Questions and Responses

The questions and responses are as follows:

1. REFERENCE: Drawing 245G1500001, M-102, Flag Note B  
Question: **Please provide basis of design for the 40 x 20 motorized dampers.**  
Answer: The basis of design is RUSKIN CD60 Opposed Blade.
2. REFERENCE: General  
Question: **The drawings indicate a new conduit between the chiller yard and the existing control panel. Is new control wiring required to be run in the new conduit?**  
Answer: Yes, new 18ga. Shielded twisted pair control wiring is required.
3. REFERENCE: General  
Question: **Does the new conduit need to be liquid tight?**  
Answer: Yes, at the chiller yard only.

SF 30 Block 14 Continuation

This amendment to the Solicitation is issued to provide amend the technical specification accordingly and the Government's response to questions/comments received in accordance with Solicitation Section L.13, Communication Regarding the Solicitation.

Section 1 Amend Technical Specification 245GCM00001

1. Reference: Page 173, Section 23 64 00.00 10, section 2.4.1, 3<sup>rd</sup> sentence.  
**Delete:** Chiller shall have a minimum full load EER rating of 9.4.  
**Replace with:** Chiller shall have a minimum full load EER rating of 9.8.
2. Reference: Page 174, Section 23 64 00.00 10, section 2.5.3, 3<sup>rd</sup> sentence.  
**Delete:** filter and drier, combination sight glass and moisture indicator, and superheat adjustment.
3. Reference: Page 178, Section 23 64 00.00 10, section 2.7.1, last sentence.  
**Delete:** Stable operation at minimum load of 10 percent of total capacity shall be demonstrated during the factory test.  
**Replace with:** Stable operation at minimum load of 25 percent of total capacity shall be demonstrated during the factory test.
4. Reference: Page 176, Section 23 64 00.00 10, section 2.5.7, last sentence.  
**Delete:** Performance shall be based on a water velocity not less than 3 fps nor more than 12 fps and a fouling factor of 0.0005 h(ft2) degrees F /BTU.  
**Replace with:** Performance shall be based on a water velocity not less than 3 fps nor more than 12 fps and a fouling factor of 0.0001 h(ft2) degrees F /BTU.

Section 2 Questions and Responses

The questions and responses are as follows:

1. REFERENCE: Drawing 245G1500001, M-102, Flag Note B  
Question: **Please provide basis of design for the 40 x 20 motorized dampers.**  
Answer: The basis of design is RUSKIN CD60 Opposed Blade.
2. REFERENCE: General  
Question: **The drawings indicate a new conduit between the chiller yard and the existing control panel. Is new control wiring required to be run in the new conduit?**  
Answer: Yes, new 18ga. Shielded twisted pair control wiring is required.
3. REFERENCE: General  
Question: **Does the new conduit need to be liquid tight?**  
Answer: Yes, at the chiller yard only.

4. REFERENCE: General  
Question: **Can we reuse the existing conduit?**  
Answer: No, the existing conduit cannot be used.
5. REFERENCE: General  
Question: **What is the COM protocol?**  
Answer: BACNetIP
6. REFERENCE: General  
Question: **Who is responsible for landing the cable at the Control Panel?**  
Answer: The Contractor will be responsible.
7. REFERENCE: General  
Question: **Where will the new control cable be landed?**  
Answer: In the existing control panel located on the mezzanine mechanical room.
8. REFERENCE: General  
Question: **The drawings indicate that the existing Controls are Andover. Will the new control points have to be Andover or Andover compatible only?**  
Answer: Yes, no other system has been approved or tested for compatibility.
9. REFERENCE: General  
Question: **Is there existing control wiring, and what should be done with that wiring?**  
Answer: Yes, that wiring will need to be removed.
10. REFERENCE: General  
Question: **Is there an existing Com port in the chiller yard?**  
Answer: No, a new Com port is required. It can be inside the chiller control panel or outside in a NEMA 4X box.
11. REFERENCE: General  
Question: **Who is responsible for programming the Control System new sequence of operation?**  
Answer: The contractor is responsible for programming the sequence of operation.
12. REFERENCE: General  
Question: **What is the job number that appears on the nameplate of the substation switch gear?**  
Answer: AKD8 Switchgear:  
Name Plate drawing: 0329A8972P101  
Device nameplate: 0144D2229  
Job No. 0179D9975  
REQN: 357-97551  
S/O: 919713  
SMY: 0343A9001  
Date: 11-23-1992
13. REFERENCE: Specification 245GCM00001 Section 23 64 00.00 10.2.4.1

**Question: The schedule states that the chillers' EER is 9.8 and the specification states that the EER is 9.4. Which is the correct EER?**

**Answer:** See Section 1 of this Amendment. The specification is amended to state the EER is 9.8.

14. REFERENCE: Specification 245GCM00001 Section 23 64 00.00 10.2.5.3

**Question: The specification states the chiller refrigerant circuits shall include a filter dryer, combination sight glass and moisture indicator and superheat adjustment. These are not available on scroll and screw machines. Is this requirement valid?**

**ANSWER:** See Section 1 of this Amendment. The specification is amended to modify this paragraph.

15. REFERENCE: Specification 245GCM00001 Section 23 64 00.00 10.2.7.1

**Question: The specification requires stable operation down to 10% of the load. The industry standard is 25% of load. Can the value of the load be revised to 25%?**

**Answer:** See Section 1 of this Amendment. The specification is amended to revise the load to 25%.

16. REFERENCE: Specification 245GCM00001 Section 23 64 00.00 10.2.5.4.1 and Drawing 245G1500001

**Question: The specification calls for lead/lag controls and the sequence of operations on the drawings call for redundant operation. Which is correct?**

**Answer:** The two chillers shall operate in redundant operations and the compressors contained in each chiller shall operate in a lead/lag fashion.

17. REFERENCE: Specification 245GCM00001 Section 23 64 00.00 10.2.5.7

**Question: The specification states that the cooler performance shall be based on a water velocity not less than 3 fps nor more than 12 fps and a fouling factor of 0.0005 h(ft<sup>2</sup>) degrees F /BTU. The new ARI 550/590 requires .0001 h(ft<sup>2</sup>) degree F/BTU. Should the new ARI 550/590 be implemented for this?**

**ANSWER:** See Section 1 of this Amendment. Use the most recent ARI 550/590 number of .0001 h(ft<sup>2</sup>) degrees F/BTU.

18. REFERENCE: Drawing 245G1500001, M-501 Typical pipe support detail

**Question: The boxed in note in the above detail calls for hot dipped galvanizing of the support steel after fabrication. Note 19 on drawing M-002 calls for supports exposed to weather to be 304L stainless steel. Please advise which is required.**

**Answer:** Hot dipped galvanizing after fabrications.

19. REFERENCE: Drawing 245G1500001, Note 21 on M-002

**Question: The above referenced note states there is to be a chilled water shut down when the bypass and pumps are installed. Will this be the same outage that the existing chillers are removed and new chillers installed, or can there be a separate shut down for the chillers?**

**Answer:** The contractor shall coordinate with the Government for a chilled water outage for the installation of the bypass. This may be at the same time as the chiller replacement.

