

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE	PAGE 1	OF PAGE(S) 17
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2. AMENDMENT/MODIFICATION NO. 2	3. EFFECTIVE DATE See Block 16c below.	4. REQUISITION/PURCHASE REQ. NO. See Block 12 below.	5. PROJECT NO. (If applicable)
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6. ISSUED BY National Aeronautics and Space Administration NASA Glenn Research Center Cleveland, Ohio 44135	7. ADMINISTERED BY (If other than Item 6)
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8. NAME AND ADDRESS OF CONTRACTOR (No. Street, county, State and ZIP: Code) Potential Offerors: Cooling Tower Rehab Solicitation	(4)	9A. AMENDMENT OF SOLICITATION NO. NNC12ZFD011E
	X	9B. DATED (SEE ITEM 11) Feb 28, 2012
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		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 one (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 DATA 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 data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)
N/A

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

	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.)

The solicitation is hereby revised as follows:

- a) The hour and date of receipt of Bids **IS** hereby extended to **April 18, 2012 at 2 p.m. local time (Eastern Daylight Time)**. Bids shall be submitted to the GRC Lewis Field Main Gate. Please note that the bid opening will take place in Building 3, Auditorium. Contractors wishing to be present for bid opening must sign in at the main gate PRIOR to 2 p.m.
- b) Section B (contained on pages 3 to 10, inclusive, of the solicitation) is hereby removed and replaced with the Revised Section B, attached.

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) AARON A. OLMSTED, CONTRACTING OFFICER		
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)	

- c) Section J (contained on page 72 of the solicitation) is hereby removed and replaced with the Revised Section J, attached.
- d) Attachment C – Lewis Field Drawings has been updated
- e) Attachment E – Plum Brook Drawings has been updated
- f) Attachment J – Additional Reference Drawings is added to Section J.
- g) Cooling Tower 5, Option 2 is deleted.
- h) Cooling Tower 5, Option 4 is renumbered to Option 3 and replaced with the following text:

Provide mechanical and electrical inspection and testing services for three (3) existing Pumps and Motors known as Pump A, B and C in Building 94. A written report of all findings and potential repairs with itemized costs shall be provided to NASA.

Pump nameplate

Mfg: Wheeler Economy, 24x20 MAC, 16,000 GPM @ 155 FT TDH, centrifugal type

Motor nameplate

Mfg: Ideal, induction type, AT, Frame 1903, 2300 Volt, 3 phase, 155 Amps, 887 RPM

- i) Cooling Tower 3, Option 7 is deleted.
- j) Questions submitted by interested parties have been answered below.
- k) Offerors must acknowledge receipt of this amendment prior to the hour and date specified above by one of the following methods:
 - 1. By signing and returning one copy of the Standard Form 30;
 - 2. By acknowledging receipt on each copy of the proposal submitted;
 - 3. By separate letter or telegram which includes a reference to the solicitation and amendment number; or
 - 4. By filling in Block Number nineteen (19) on the Standard Form 1442 of the solicitation.
- l) Failure of the Offeror to acknowledge this amendment may be cause for rejection of the proposal.

COMPANY: _____

ADDRESS: _____

CITY: _____

STATE / ZIP: _____

Two attachments to this amendment:

- 1) Revised Section B
- 2) Revised Section J

QUESTIONS AND ANSWERS

- 1. Would you require our firm, if we are successful, to provide the Procedure Qualification Records (PQRs'), Lab Results, and Welding Procedure Specifications (WPS')? This is generally a requirement with ASME codes and there are a lot of variables to consider when doing so.**

All welded systems require PQRs, WPSs, Testing Results, and Material Certifications of Conformance. Cooling Water systems at GRC are managed as following ASME B31.3

- 2. In the document 149708-SOL-001-003, the contractor is responsible for out sourcing the quality testing tasks. Would NASA consider using a firm like ours for what is called surveillance inspections?**

The successful contractor will need to provide all services as applicable to fulfill all testing and inspection requirements for piping installations. It is the Contractor's discretion on how to best provide these services to fulfill their contract per applicable Codes and Standards.

- 3. Approximately what percentage of this project would be performed at the manufacturer's locations?**

Lewis Field has established systems and the general work will be field alterations and/or modifications.

Plum Brook Station SPF is intended to bring new equipment and tie-in to the existing cooling water system loop. Depending on how the contractor implements their work, the percentage that is factory versus field can vary. We are unable to provide a reasonable percentage due to the variable means and methods that could be implemented.

- 4. At what temperature do these cooling towers operate at and under how much pressure?**

Cooling Water systems at GRC have a piping system criteria of Working Pressure 70 psig, MAWP 90 psig, Test Pressure 135 Psig and a working temperature of 200 degrees F.

Cooling Water system for the Space Power Facility piping system criteria can be found on drawing 1411-COF14901-M-601.

- 5. Clause I.107 states the geographical restrictions placed on the contractor. The question is does that include sub contractors and/or NASA representative inspector?**

No, the geographical restriction is limited to the Prime Contractor.

- 6. The amount of welded components is unclear in the issued drawings. Would it be possible to get an estimate of welded joints, or total welding aspects in this project? I am referring to the phase II plans. Are they showing new construction of the piping systems or refurbishment of an existing system?**

Lewis Field intent is minimal piping changes (e.g. ERB pipe spools and/or flanges) local to the valve change outs which would be modifications to an existing piping system.

Plum Brook Station will have the majority of the pipe welds for the new cooling water system components and several where tie-ins to existing piping occurs.

7. **The list of government furnished valves indicates that the Cooling Tower No.1 Riser valves purchased are 12" however drawing CE-0010-COF13572-MJ-101 note 2 indicates that the new valves should be 10". Which is correct?**

The eight (8) valves staged currently at Bldg 37 are 12" diameter.

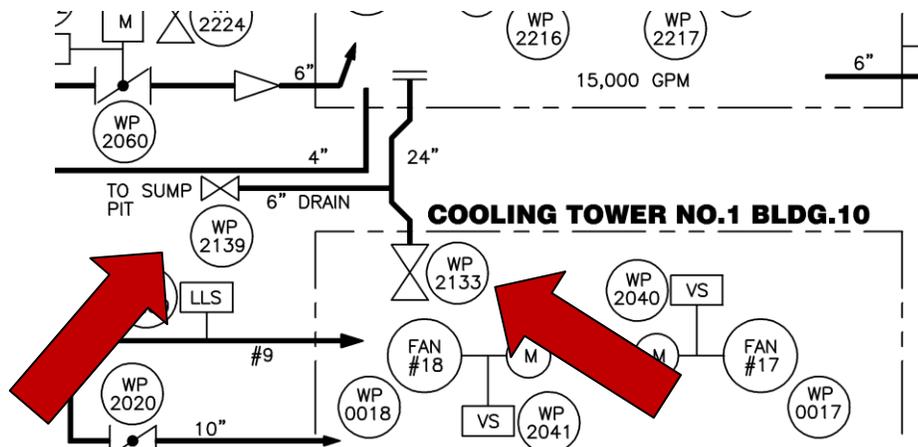
Through field verification by on-site personnel, two (2) existing valves are 12 inch and six (6) existing valves are 10 inch.

We are in the process of changing the six (6) Gov't Furnished valves to the 10" diameter size.

8. **Drawing CE-0010-COF13572-MJ-101, valve# WP2139 is tagged with note 2 indicating that it is a 10" valve is this correct?**

Valve ID # WP-2139 is a 6 inch valve.

Reference for Question 8 and 9 with an excerpt from the GRC CT 1 & 4 system P&ID



The indicated note 2 on the drawing is not correct for the valve ID WP-2139.

9. **Valve # WP2133 what size is this valve?**

Valve WP-2133 is a 24 inch diameter valve. The valve replacement will be provided as Government Furnished Equipment (GFE). Contractor will remove the existing valve and install the provided valve.

10. **Please verify that all work shown on drawing CE-0010-COF13572-CU-201 for the Equalizer line 'A' & 'B' Profiles is not part of the scope of work for this IFB as stated in the bidding documents.**

To verify, the equalizer line(s) and associated profile elements are Not In Scope, only the indicated valves (WP-2133 and WP-2139) are to be replaced as listed in the Bid Summary.

The drawing with the profile was included as information that may be useful to the Contractor.

11. Drawing CE-0074-COF13572-MP-101 for cooling towers 3&6 indicates that all the work show on this drawing is option #4 however, the bid form for option #4 for tower 3 is decking etc. type of work and option #4 for tower 6 is painting. Please advise.

Strike the options notations indicated on the reference drawing.
The provided Bid Summary Options supersede the option notations found on the referenced drawing.

12. Drawing CE-0093-COF13572-GI-101 please clarify note #3, are we permitted to work on tower 5 starting on July 9,2012 or do we have to wait until towers 1&4 work is completed?

The Contractor may start work on the respective Cooling Tower(s) once appropriate lockout/tagout has been completed and the system drained. Mobilization and material staging can begin prior to isolation activities.

Basin of Cooling Tower 5 will be drained first. Scheduled to start on July 3 and estimated at 2 days for draining. Note July 4 is a Federal Holiday.

Basins of Cooling Tower 1 and 4 will begin on or after July 6. Estimate 2 to 3 days for draining.

Reasonable expectation would be that July 9 would be the earliest date to start piping and basin scope items at CT 5 and then afterwards (approximately mid week) at CT 1 and 4.

The quantity of water discharged to the wastewater system from the two CTW systems does not permit them to be done simultaneously.

13. Drawing CE-0010-COF13572-MJ-101 states that 8 gearboxes are to be replaced on tower 1. Does each gear box require a new extension of the oil filtering lines? How many gear boxes require an extension on tower 4? How many gear boxes require an extension on tower 5?

The intent is that each fan gearbox would receive new oil filtering piping lines (supply and return) as indicated in the provided detail.

The Bid Summary intent is to exercise the following:

Cooling Tower No 1 has eight (8) gearboxes to be replaced and intend to include the eight oil filtering lines to provide a complete rehabilitation of the fan gearbox at these locations.

There are a total of eighteen (18) fan gearboxes at CT No 1. We did not include the change out of the remaining ten (10) fan gearbox filtering lines in the Bid Summary. Please provide a cost as an option to replace these remaining ten locations at CT No 1.

Cooling Tower No 4 has four (4) fan gearboxes and the intent to rehabilitate the oil

filtering lines is in the Bid Summary as an option under CT 4 Option # 4.

Cooling Tower No 5 has fourteen (14) fan gearboxes and the intent to rehabilitate the oil filtering lines is in the Bid Summary as an option under CT 5 Option # 3.

14. What type of pipe is existing underground Cooling Tower Supply and Return?

The 14" (CTW) lines are Steel Schedule 10, welded ASTM A 135, Grade A and the pressure class is 125 psi. Per the SPF Process Piping Manual, the joints are butt welded and fittings should match the schedule of pipe.

It is assumed all other piping to be ASTM A-53 Grade B Schedule 40. Differing conditions shall be an assumed risk.

15. A schedule is clear for the work @ Lewis Field, but what is the schedule for the Plumb Brook work?

Space Power Facility has a test program scheduled between March and August 2012. There are tentative test programs thereafter (~ November 2012).

We envision that a set amount of construction can be implemented as we coordinate with the successful bidder on a shutdown period for the existing cooling water system.

We require Contractor input to understand the length of time projected to complete the integration of the new equipment and system elements (i.e. relining, cut/cap, checkout, etc.) for an outage window that is mutually beneficial.

16. Per Drawing MS 101 the tie in work on the 14" Cooling Tower water:

A. How deep are the existing lines?

The east pipe bend outside of the facility is approximately 4'-0" below grade to the top of pipe.

See the additional reference drawings (PF-40014, PF-41075, PF-41076 and PF-41085) provided for miscellaneous piping elevations that may be of value to the Contractor.

B. What is the volume of cooling water that has to be drained in order to make the tie in?

The volume of water held in the cooling tower basin is approximately 12,000 cubic ft.

C. Does NASA require this cooling water be reused or legally disposed of?

From 1411-COF14901-GI-101

THE CONTRACTOR SHALL COORDINATE ALL WASTE MANAGEMENT ACTIVITIES WITH THE COTR, OAT AND PLUMB BROOK ENVIRONMENTAL OFFICER. WASTE HANDLING AND DISPOSAL ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS FOR WASTE MATERIAL. NASA WM WILL BE GIVEN 1 MONTH'S NOTICE FOR WASTE SHIPPING.

As stated at the Site Showing, NASA intends to sample the cooling water system once switchover is scheduled to provide a determination for disposal. For bid purposes, we are anticipating that the water can be discharged to the surrounding area south of the facility.

17. Per Drawing GI 101 Key notes 6, what is existing water line material?

Per the SPF Process Piping Manual, the material is Steel Schedule 20, ASTM A 135, Grade A.

18. Per Drawing GI 101 Key notes 9, what is existing water line material?

Per the SPF Process Piping Manual, the material is Steel Schedule 20, ASTM A 135, Grade A.

19. Per M 601 Sanitary Underground specification is PVC SDRZ6 ... Do you mean SDR26?

SDR26 is correct.

20. Please clarify the chemical treatment specification.

The chemical treatment process shall be an Ozone system per specification 23 64 26

21. Please provide Water meter spec and size. 22 64 26. Where will remote register reader be located? 2.12 1.3

The water meter specification is in Section 22 64 26, paragraph 2.12.1.3. The meter size is 3" and the remote register should be located adjacent to the PLC Panel.

22. Per Drawing M-801 who provides make up water solenoid valve?

The Contractor shall provide the valve.

23. If piping contractor provides makeup water solenoid valve what is size and specification?

The valve shall accommodate a 3" line size, the solenoid valve will be supplied by the cooling tower manufacturer. The specification is contained under 23 65 00, paragraph 2.5.1.6.

24. Please specify how to plug abandon 14" cooling tower lines. Welded cap? Grouted?

A cap can be used. Specifications 31 23 01.98 Section 3.10 indicates: "Open ends of metallic conduit and pipe shall be closed with threaded galvanized metal caps or plastic plugs or other approved method suitable for the type of material and size of pipe."

Grouting is preferred to permanently plug existing lines that are to be abandoned in place.

25. What is the distance between the supply and return piping underground?

The distance should match the cooling tower assembly connections.

Please see drawing PF-40014 (Section J, Attachment J – Additional Reference Drawings).

26. The specification for Cooling tower water 23 64 26-7 2.2 Steel pipe indicates only steel.

A. Is there a spec section for underground pipe?

Underground pipe is per specification 23 64 26 section 2.2

B. Is underground pipe to be installed with no insulation and or no protective outer covering or shell @ Pipe & Fittings?

Protective outer coatings are covered in sections 09 90 00 00.98 and 09 97 13.00 40.

Ferrous Underground piping shall be protected with an outer covering:

The 8 mil minimum, group 2, linear low density, flat tube, virgin polyethylene film provided meets or exceeds the requirements of AWWA C105-10, ANSI A21.5-10, ASTM D4976 and NT4112-10. The film is marked showing trademark, year of manufacture, type of resin, specification conformance, applicable pipe sizes and a corrosion protection warning.

Provide Polywrap or approved equal and joints shall be taped for dielectric protection.

27. Is lead paint or asbestos present where any power washing is required and we need to worry about containing these items?

Lead Based Paint is assumed to be present at, on and around the various components of Cooling Towers and ERB Piping.

The exterior siding of the Cooling Towers is fiberglass unless proven otherwise.

Wash water can permeate on the existing gravel and grade surrounding the Cooling Tower but cannot enter any Storm Sewers on the Center. Measures may be needed to prevent wash water from entering the storm sewer system as applicable.

28. Drawing GI-101 Note #1 States ‘Provide Contingency of 2 Additional Gear Boxes.’ On Drawing MJ-101 it does not list this under Note #1...Please confirm if we are to provide pricing for 10 gear boxes or 8 gear boxes on Cooling Tower #1.

Ten (10) gear boxes shall be purchased. Eight (8) are to be installed by the Contractor.

29. CE-0010; GI-003; Contingency Items. Please explain where we are to include our unit prices, are they to be included in the Base Bid scopes or under the respective Option pricing?

Unit prices are established for items that may vary in quantity for both Base Bid and Option items.

30. CE-0010; GI-102: Note #2 & #8: Install Handrail around Exterior Deck on Top of Structure. – Please provide detail of handrail to be constructed.

Per Key Note 2, the handrail shall be in accordance to OSHA standard (the contractor can reference 29 CFR M 1926.502 and the project specification 23 65 00. A generic section view of the proposed handrail has been included in the plans.

31. CE-0010; CD-101: Note #4 Calls for the existing roof hatch to be removed. Are we replacing it with new or repair existing?

The hatch shall be new per drawing SF-101

32. CE-0084; S-101: Note #4 Refers to crack injection to seal Interior & Exterior of basin walls for injection. Due to conduits running along the exterior basin walls, it would be impossible to seal the exterior. We would recommend a urethane crack injection in lieu of an epoxy injection. The urethane injection will expand and cure within 20 seconds allowing it to cure in the wall instead of leaking out the exterior which would happen with an epoxy injection. Please confirm urethane injection is acceptable.

Epoxy injection shall be used as specified. The existing anchors from the conduit can be temporarily removed and reinstalled if there is a location conflict.

33. Drawing CE-0010; S-101 CT#1 indicates a Note #4 on the Plan profile pointing towards the center partition wall; there is no description under Key Notes for a #4 note?

The callout for Note 4 is in error, it should be Note 3

34. We need to know the elevation of the Basin Walls & Cooling Tower in order to calculate the square footages for painting walls, power washing, etc...

The following are approximate basin heights per each cooling tower:

- CTW 1 = 5'
- CTW 3 = 7.75'
- CTW 4 = 6.5'
- CTW 5 = 5.5'
- CTW 6 = 7.0'

Typical height of a Cooling Tower is 32'-0" +/- from grade to top of walkway

35. On the Westinghouse breaker that needs the trip unit adjusted. What is the model number/type of the breaker? What is the trip unit type, Amptector, Digitript, AC Pro or is it a mechanical trip? If the unit is a mechanical trip, it will need retrofitted also.

Existing unit contains a mechanical trip. The existing breaker retrofit will be an assumed risk.

36. Spec section 23 64 26-page 17-2.7.3 Source Quality Control requires that the packaged pumping system be factory tested before shipping. This requirement is somewhat unreasonable because of the electrical power required to run multiple 150hp pumps at one time and more importantly the volume of water required to test a system designed to run multiple pumps rated for 2375GPM @ 175 ft head. That volume of water is not readily available to perform any practical tests. For these reasons it is proposed that the testing be done after the system is installed. Please confirm.

The pumps shall be tested per the specification referenced above.

Note that the pumps shall be individually tested for performance per the specification.

- 37. Drawing SF-101 Section B-B refers to note # 3 for Roof Hatch Specifications, however Note #3 refers to decking and Note #4 refers to roof hatch. Please confirm this should be note #4.**

Section B-B note should be 4

- 38. There are specific notes on the drawings for cooling tower #1 to power wash & epoxy coat interior of basin. On CT#4 there are no specific notes indicating this, but it is listed in the Option Work to include this work. Just want to confirm that this is to be performed at CT#4 too.**

Note is included as Key Note 1 on GI-102

- 39. CE-0126; S-101: Note #3: Repair Basin Slab Crack. What is the size of the cracks in the slab? What method should be used to repair these slab cracks?**

The method to repair the cracks is included on Sheet S-101. The estimated length of repair is 90 linear ft.

- 40. Under the BID ISSUE Spec Rev. 03; B. Project Requirements; BASE; ‘Replace the valves (ID# WR-2133 & WP-2139) on the existing equalizer line. Note that the rework of the equalizer line is a Not In Scope Item.’ What does this mean?**

To clarify, we are not exercising any rework of the equalizer line. The drawings were included to provide information that may not otherwise be found on other applicable drawings.

The scope of the existing equalizer line is only to change out two (2) existing valves. One (1) 24 inch existing valve in the CT 1 basin shall be removed and replaced with a new 24 inch butterfly valve which is provided as GFE. One (1) 6 inch existing valve shall be removed and replaced with a new 6 inch valve to be provided by the Contractor which is the drain line of the existing equalizer line at the CT 4 sump pit.

- 41. Scopes too Generic for: ‘Repair Top Decking, deck supports, internal walkways, stairs, hatches and doors of Cooling Tower.’ We need some kind of quantity of repairs in order for all contractors to bid on an ‘apples to apples’ comparison.**

It is a general note on the General Information Sheets (GI), however if there are specific items to be repaired it is included in a specific detail sheet (e.g. CE-0010-COF14901-S-101). The exception is the door to Cooling Tower 6 shall be replaced in kind per specification section 23 65 00, Section 2.5.13 and 06 10 00.

- 42. CT#5: Option #2 There are no drawings or pics indicating repairs needed on siding? Please provide information on how many repairs are required.**

There is no siding work on Cooling Tower 5. CT No 5 Option #2 can be stricken.

- 43. Is any work to be performed on the walkway between towers 3 & 6?**

No

44. CE0070; S-101: Note #4; Install Fan Seal – Does this occur on all fans or just 2 fans? What kind / size of fan seals are required?

Two fan tip seals shall be installed per 23 65 00, Section 2.5.17 and shall match the blade manufacturer type

45. CT#5, Option #4; Refurbish Pumps A, B and C electrical components completely. – Where are the pumps located? What are the Electrical Components to be refurbished, Only Electrical? Please provide Specifications and more information to this.

Option #4 shall be renumbered to Option #3 and rewritten as the following:

Provide mechanical and electrical inspection and testing services for three (3) existing Pumps and Motors known as Pump A, B and C in Building 94. A written report of all findings and potential repairs with itemized costs shall be provided to NASA.

Pump nameplate

Mfg: Wheeler Economy, 24x20 MAC, 16,000 GPM @ 155 FT TDH, centrifugal type

Motor nameplate

Mfg: Ideal, induction type, AT, Frame 1903, 2300 Volt, 3 phase, 155 Amps, 887 RPM

46. CT#3, Option #7 ‘Refurbish Cooling Tower No. 3 Pumps No. 1 and no. 3 completely – Please define what ‘completely’ means? We also need information to the type, model, manufacturer, specs, locations, etc...and the work to be associated with refurbishing these pumps.

CT 3 Option #7 shall be stricken and no longer part of the bid proposal.

47. CE0070; GI-101; There are dark patches on the Cooling Tower Plans; wasn’t sure if this was highlighted and after printing it blacked out these areas, or if they are marking limits of work. Please confirm if these areas indicate anything.

The dark patches obscure text indicating notes and/or symbols on print versions.

On 0010-COF14901-GI-102:

Titles of Cooling Tower no 1 and No 4

Test indicating (Typ.) and key notes # 6

The electronic copies of the drawings do not contain these dark patches. See attachment J – Additional Reference Drawings for copy of affected drawings.

48. Please confirm that ALL Valves are being provided by NASA. If not, please provide clarifications to which valves are to be provided by contractors.

See Section J: Attachments H and I of the contract. All other valves shall be supplied by the Contractor.

49. Re: 6” drain line for 24” equalizer piping. Drawing GI -101 and CU-201 states that the existing 6” drain line for the 24” equalizer line is to be removed. Drawing CU-201 further states that the line is to be plugged with non-shrink grout where it enters the sump. Drawing GI also states that the 6” line is to be removed and replaced on the existing 24” line and a new 6” line installed

on the new 24” line but the 6” lines are not shown anywhere on the drawings. If these 6” drain lines are required please provide engineering details.

To clarify, we are not exercising any rework of the equalizer line. The drawings were included to provide information that may not otherwise be found on other applicable drawings.

The scope of the existing equalizer line is to change out two (2) existing valves. One (1) 24 inch existing valve shall be removed and replaced with a new 24 inch butterfly valve which is provided as GFE. One (1) 6 inch existing valve shall be removed and replaced with a new 6 inch valve to be provided by the Contractor which is the drain line of the existing equalizer line.

50. Is it safe to presume that the existing 24” valve on the existing 24” equalizer line is to be reused as is or did NASA purchase two new 24” valves.

One (1) 24 inch existing valve shall be removed and replaced with a new 24 inch butterfly valve which is provided as GFE.

51. Ref sketch SK-COF14901-CT1-1 Gear Box Lube Oil Filtering Piping – The 1” & ¾” Hyd fittings, are they SAE 37 deg flared fittings (AN fittings) and if yes, should they be supplied with caps?

Contractor shall supply SAE type (45 deg) hydraulic fittings with caps as applicable. AN type (37 deg) fittings with cap are not specifically required.

52. Drawing GI-101 states the tower fan gear boxes are to be replaced along with new shafts and couplings. Please provide engineering specs and details for shafts and motor and gear box couplings.

Per Key Note 1, the specifications package provides the details and part numbers on the Gear Boxes.
See page 519 through the Bill of Material Sheet (page 534) of the Lewis Field Specification PDF file.

53. Are any of the manual or control valves that we saw stored at Glenn intended for use at Plum Brook or are all they intended to be purchased?

All Government Furnished Equipment (GFE) is related to the Lewis Field scope.

No GFE is being provided for the Plum Brook Station scope.

54. Drawing MP101 shows four expansion joints for cooling tower 3 or 6 that apparently need to be purchased and installed. 1) These expansion joint replacements are not called out on the list of options for cooling towers 3 or 6. 2) Where are these expansion joints located on the towers? There is not enough detailed information to obtain pricing for these, please provide more details and specifications.

This drawing pertains to project scope that is not part of the bid package. Bidders may ignore this drawing.

55. Plum Brook – Drawings and specs indicate that all above and below ground piping is schedule 40 carbon steel. Does the below ground piping require painting, special coating or galvanic protection?

Review specification 09 97 13.00 40 in the Plum Brook Specification set.

Additional, Ferrous Underground piping shall be protected with an outer covering:

The 8 mil minimum, group 2, linear low density, flat tube, virgin polyethylene film provided meets or exceeds the requirements of AWWA C105-10, ANSI A21.5-10, ASTM D4976 and NT4112-10. The film is marked showing trademark, year of manufacture, type of resin, specification conformance, applicable pipe sizes and a corrosion protection warning.

Provide Polywrap or approved equal and joints shall be taped for dielectric protection.

56. I was reviewing the cooling tower prints for the project at Plum Brook and looks like there is a liner in the 14" steel pipe. Is liner supposed to be able to withstand internal pressure and what pressure does it need to withstand? I think the spec is just a standard sewer spec which I do not believe is applicable in this case.

The liner should be structural as capable of withstanding the loads of the system w/o considering the existing piping, in this case a minimum of 150 psig. Test pressures for the CTW are 135 psig as indicated on M-601. Refer to Specification 22 05 83.63.

57. Are we to include power washing and painting the exterior basin walls or just the interior basin walls?

The intent is to clean and coat all concrete surfaces of the basin. Include the exterior portions from grade to top of basin wall.

58. What is the completion date for Plum Brook?

Space Power Facility has a test program scheduled between March and August 2012 that requires a functional cooling water system at the facility.

There is a tentative test program(s) thereafter (~ November 2012).

We envision that a set amount of construction can be implemented as we coordinate with the successful bidder on a shutdown period for the existing cooling water system.

We require Contractor input to understand the length of time projected to complete the integration of the new equipment and system elements (i.e. pipe relining, cut/cap, etc.) for an outage window that is mutually beneficial.

The Contract Period of Performance is September 30, 2013. All exercised work must be completed by that date.

59. Can NASA please clarify the build schedule: GRC July 9 – August 247 weeks?

To clarify – GRC Lewis Field 2012 Annual Shutdown is July 3rd through August 24th

Reasonable expectation would be that July 9 would be the date the project can physically start scope items at CT 5 and then afterwards (approximately mid week) at CT 1 and 4.

The Contractor may start work on the respective Cooling Tower(s) once appropriate lockout/tagout has been completed and the system drained.

Mobilization and material staging can begin prior to system isolation activities.

Basin of Cooling Tower 5 will be drained first. Scheduled to start on July 3 and estimated at 2 to 3 days for draining. Note July 4 is a Federal Holiday.

Basins of Cooling Tower 1 and 4 may begin on or after July 6. Estimate 2 to 3 days for draining.

60. Plum Brook Station is going to be adhering to a different schedule due to a different testing schedule. Can NASA identify this?

Space Power Facility has a test program scheduled between March and August 2012.

There are tentative test programs thereafter (~ November 2012).

We envision that a set amount of construction can be implemented as we coordinate with the successful bidder on a shutdown period for the existing cooling water system.

We require Contractor input to understand the length of time projected to complete the integration of the new equipment and system elements (i.e. pipe relining, cut/cap,, etc.) for an outage window that is mutually beneficial.

61. Will NASA please provide clarity as to the coordination requirements that will need to be taken into consideration for the phase I work and now phase II work. What is the current scope of work and schedule for the contractor performing the work?

Remaining Phase I work occurs at Cooling Tower 5 and will need to occur during the 2012 Annual Shutdown period. The following work previously scheduled under Phase I: Rehabilitation of the 84 inch line from the Tower and into Building 94. Work entails surface preparation and coating interior surface including transverse stubs, interior piping and hangar assemblies. See drawing 0093-COF13572-GI-101 for reference purposes only.

Repair concrete basin and replace deteriorated structural framing.
See drawing 0093-COF13572-S-101 included for reference purposes only.

62. Can NASA quantify and delineate the work to be performed by NASA Control Contractor ES101

The on-site contractor (MTI) is tasked with the termination of the control wires between designated cabinets to final control locations and includes the checkout and testing of the installed valves.

The bid scope is to route cable and conduit to the designated cabinet with a coil of cable whereby the in-house contractor can complete the terminations. We are required to assure that the cable installed can carry signals from point (valve) to point (coiled cable at designated cabinet).

63. What is the Task Order difference as noted on the drawings SW0531, SW0530, SW0529, WO 1038792? This current SOW is solicitation NNC12ZFD011E.

The Task Orders pertain to the scope of the in-house contractor to complete the various installations and are not in the bid scope.

- 64. What is the general contractor to do with old fill media material at the bottom of the cooling towers? Does this material have a proctor? Can it be considered solid waste and go to landfill or is it light hazardous material subject to special disposal constraints?**

Old fill media is anticipated to be properly disposed of as Construction Debris.

- 65. Can the existing cable trays be used for the electrical wiring where applicable or does all wiring have to be installed in conduit?**

Existing cable trays can be used provided there is appropriate space available for additional cables and the installation complies with all applicable Electrical Code requirements.

- 66. Can NASA identify areas where high voltage cables are present or other safety specific concerns that exist?**

Known HV cables and/or equipment adjacent to bid scope:

Transformer and cables adjacent to the CTW Valves in the basement of Building 38 and as stated at the Site Showing, we will need to coordinate how work will be implemented between the valve change out work and the existing electrical equipment

Sub E (Building 42) is adjacent to the northeast end of Cooling Tower No. 1 and as stated at the Site Showing, we will need to coordinate how work will be implemented on the Cell(s) closest to this area.

- 67. There appears to be a conflict with the Bid Schedule Form / Bid Issue Guide and Spec Section 23 65 00 Cooling Towers. Under the work called out in the specifications for Cooling Tower #6, it states to 'Replace fill material in six bays & extend partition walls'. This is not shown under your option work and we are unsure where/if this work should be included. Could you please clarify these scope items?**

Extension of partition walls shall be considered as under the structural repairs for CT 6 Option # 2.
Replacement of fill media and drift eliminators for CT 6 was not considered for this Bid Summary.

- 68. What is the internal design pressure for this pipe? What is the pressure the CIPP liner is to be designed for?**

Pipe design criteria for cooling water is located on drawing CE-1411-COF14901-M-601.

- 69. Lining through 45 degree bends is possible, but all liners will have issues with folds occurring in the liner when lining through 90 degree bends. It appears that the 90 degree bends will be removed to allow access to line the pipe. If that is the case, should the steel 90 degree bends be re-installed with compression coupling, welded, etc? Or should the 90 degree bends be replaced with a material such as pressure rated PVC or ductile iron since the 90 degree bends cannot be effectively lined with the CIPP.**

Contractor shall restore all service connections to comply with the existing system specifications as applicable.

The 14" (CTW) lines are Steel Schedule 10, welded ASTM A 135, Grade A and the pressure class is 125 psi. Per the SPF Process Piping Manual, the joints are butt welded and fittings should match the schedule of pipe.

70. The specifications speak of inflating the liner with compressed air at 10 psi. Most CIPP systems use heated water to inflate at about 25 psi, will this be acceptable?

Contractor is responsible to install the product per manufacturer's recommendations. All requirements of the CIPP manufacturer in excess of the provided specifications shall be provided to NASA for field oversight and final acceptance.

71. What is the chemical makeup of the water flowing through the cooling tower water pipes?

There is not a sample of the existing cooling water. Attached are the results of the incoming (make-up) water to the facility.

72. Does it matter if the inside of the CIPP liner is a yellow color and not light blue?

Per Specification 22 05 83.63 part 2.1.3, provide a cured liner with a light blue reflective internal wall color so that a clear detail CCTV inspection can be accomplished.

If other liner colors (e.g. yellow) can provide an equivalent type of inspection, then they could be provided.

73. The specs mention grease build up in the pipe preparation section. Will grease be encountered or was this a standard spec from a CIPP sewer liner?

Grease was a carry-over statement from another specification.

74. Under the curing section, it is mentioned that the curing occurs within 1 hour. Will two hours be acceptable?

Curing time of the selected product shall be per manufacturer's recommendations.

75. Is there a profile which shows the depth of the 14" lines?

The profile for the SPF yard piping is undocumented.

See the additional reference drawings (PF-40014, PF-41075, PF-41076 and PF-41085; See Section J, Attachment J – Additional Reference Drawings) provided for miscellaneous piping elevations that may be of value to the Contractor.



WATER ANALYSIS REPORT

COMPANY: <u>NASA/Barr & Prevost</u>		DATE OF SAMPLE: <u>12/15/2011</u>			
LOCATION: <u>NASA Cooling Tower</u>		SYSTEM ID: <u>MAKEUP</u>			
SAMPLE POINT ID	Make-up from Entrance Gate				
Laboratory Sample No.	7981				
Total Hardness as CaCO ₃ , ppm	130.0				
Calcium as CaCO ₃ , ppm	110.0				
Magnesium as CaCO ₃ , ppm	20.0				
Phenolphthalein Alkalinity as CaCO ₃ , ppm	10.0				
Methyl Orange (Total) Alkalinity as CaCO ₃ , ppm	120.0				
Sulfate as SO ₄ , ppm	26.0				
Chloride as Cl, ppm	10.0				
Silica as SiO ₂ , ppm	3.2				
Total Phosphate as PO ₄ , ppm	1.10				
Total Inorganic Phosphate as PO ₄ , ppm	0.67				
Ortho Phosphate as PO ₄ , ppm	0.67				
pH	8.33				
Specific Conductance micromhos @ 25C	255.1				
Specific Conductance micromhos @ 25C (corrected)					
Total Iron as Fe, ppm	0.01				
Total Copper as Cu, ppm	0.01				
Total Zinc as Zn, ppm					
Aluminum as Al, ppm					
Manganese as Mn, ppm					
Molybdate as MoO ₄ , ppm / Mo ⁶⁺ , ppm	/	/	/	/	/
Nitrite as NO ₂ , ppm					
Triazole as TTA, ppm					
Ammonia	0.0				

Service Representative: LEX LAMOTTE

Database ID: 7784

13621 Trilithon Road Midlothian, VA 23113 Phone: (804) 594-3871 Fax: (804) 594-3872

SECTION B - SUPPLIES OR SERVICES AND PRICES

B.1 SUPPLIES AND SERVICES TO BE FURNISHED – CONSTRUCTION

The contractor shall provide all personnel, facilities, equipment, material, and resources (except as may be expressly stated in this contract as furnished by the Government) necessary to perform the construction work as described in the Description/Specifications/Work Statement in Section C (Attachment A).

(End of clause)

B.2 OFFER SCHEDULE CONSTRUCTION

The Offer Schedule shall be completed by the bidder and made a part of the offer under block 17 of the Standard Form 1442 (SF-1442). Contractor shall bid on the following for each Cooling Tower Water System.

(a) Cooling Tower No. 1

BASE OFFER COOLING TOWER ONE —

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C) **[EXCLUDING OPTION ITEMS]:**

\$ _____

OPTION NUMBER ONE (1)

PROVIDE PRESSURE WASH, CLEANING AND EPOXY COATING TO BASIN

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER TWO (2)

CLEAN, PRIME AND PAINT ALL STEEL FRAMES, MOTORS, MOTOR BASES AND ALL OTHER APPLICABLE MISC COMPONENTS AND/OR ITEMS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER THREE (3)

POWER WASH, REPAIR AND SEAL EXTERIOR SIDING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER FOUR (4)

REPLACE VALVE PIT COVERS IN KIND AT COOLING TOWER NO. 1

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER FIVE (5)

REPLACE ALL FAN DISCONNECT PANELS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

(b) Cooling Tower No. 4

BASE OFFER COOLING TOWER FOUR —

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C) **[EXCLUDING OPTION ITEMS]:**

\$ _____

OPTION NUMBER ONE (1)

PROVIDE PRESSURE WASH, CLEANING AND EPOXY COATING TO BASIN

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS

NNC12ZFD011E COOLING TOWER REPAIR – AMENDMENT 2

(SECTION C):

\$ _____

OPTION NUMBER TWO (2)

CLEAN, PRIME AND PAINT ALL STEEL FRAMES, MOTORS, MOTOR BASES AND ALL OTHER APPLICABLE MISC COMPONENTS AND/OR ITEMS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER THREE (3)

REPAIR AND SEAL EXTERIOR SIDING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER FOUR (4)

INSTALL EXTENSION LINES FOR GEARBOX OIL FILTERING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

(c) Cooling Tower No. 5

BASE OFFER COOLING TOWER FIVE —

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C) **[EXCLUDING OPTION ITEMS]:**

\$ _____

NNC12ZFD011E COOLING TOWER REPAIR – AMENDMENT 2

OPTION NUMBER ONE (1)

PROVIDE PRESSURE WASH, CLEANING AND EPOXY COATING TO BASIN

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER TWO (2)

REPLACE EXTENSION LINES FOR GEARBOX OIL FILTERING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER THREE (3)

REFURBISH PUMPS A, B AND C ELECTRICAL COMPONENTS COMPLETELY

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

(d) Cooling Tower Space Power Facility (SPF)

BASE OFFER COOLING TOWER SPACE POWER FACILITY (SPF) —

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C) **[EXCLUDING OPTION ITEMS]**:

\$ _____

OPTION NUMBER ONE (1)

PROVIDE COOLING TOWER CELL # 3 AND ASSOCIATED COMPONENTS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND

NNC12ZFD011E COOLING TOWER REPAIR – AMENDMENT 2

MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS
(SECTION C):

\$ _____

B.3 ADDITIONAL OPTIONS:

(a) Cooling Tower No. 3

OPTION NUMBER ONE (1)

REPLACE FAN VIBRATION SWITCHES (TOTAL OF 10) AND ASSOCIATED
ELECTRICAL COMPONENTS, CONDUIT AND WIRING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND
MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS
(SECTION C):

\$ _____

OPTION NUMBER TWO (2)

REPAIR STRUCTURAL MEMBERS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND
MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS
(SECTION C):

\$ _____

OPTION NUMBER THREE (3)

REPLACE FILL MATERIAL AND DRIFT ELIMINATORS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND
MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS
(SECTION C):

\$ _____

OPTION NUMBER FOUR (4)

REPAIR TOP DECKING, DECK SUPPORTS, INTERNAL WALKWAYS, STAIRS,
HATCHES AND DOORS OF COOLING TOWER

NNC12ZFD011E COOLING TOWER REPAIR – AMENDMENT 2

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER FIVE (5)

CLEAN, PRIME AND PAINT ALL STEEL FRAMES, MOTORS, MOTOR BASES AND ALL OTHER APPLICABLE MISC COMPONENTS AND/OR ITEMS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER SIX (6)

POWER WASH, REPAIR AND SEAL EXTERIOR SIDING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

(b) Cooling Tower No. 6

OPTION NUMBER ONE (1)

REPLACE FAN VIBRATION SWITCHES (TOTAL OF 14) AND ASSOCIATED ELECTRICAL COMPONENTS, CONDUIT AND WIRING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER TWO (2)

REPAIR STRUCTURAL MEMBERS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER THREE (3)

REPAIR TOP DECKING, DECK SUPPORTS, INTERNAL WALKWAYS, STAIRS, HATCHES AND DOORS OF COOLING TOWER

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER FOUR (4)

CLEAN, PRIME AND PAINT ALL STEEL FRAMES, MOTORS, MOTOR BASES AND ALL OTHER APPLICABLE MISC COMPONENTS AND/OR ITEMS

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

OPTION NUMBER FIVE (5)

POWER WASH, REPAIR AND SEAL EXTERIOR SIDING

THE FIXED PRICE AMOUNT FOR FURNISHING ALL SERVICES, LABOR AND MATERIAL FOR WORK DELINEATED IN SPECIFICATION AND DRAWINGS (SECTION C):

\$ _____

B.4 1852.216-78 FIRM FIXED PRICE (DEC 1988)

The total firm fixed price of this contract including ALL Base Bids (Cooling Towers 1, 4, 5, SPF) and **ALL** options (Cooling Tower 1 Options 1-5, Cooling Tower 4 Options 1-4, Cooling Tower 5 Options 1-3, Cooling Tower SPF Option 1, Cooling Tower 3 Options 1-6, Cooling Tower 6 Options 1-5) is (Amount in words):

\$ _____

B.5 1852.214-71 GROUPING FOR AGGREGATE AWARD (MAR 1989)

(a) The Government will evaluate offers and make award on a basis of the aggregate offers for items:

ALL Base Bids (Cooling Towers 1, 4, 5, SPF) and ALL options (Cooling Tower 1 Options 1-5, Cooling Tower 4 Options 1-4, Cooling Tower 5 Options 1-4, Cooling Tower SPF Option 1, Cooling Tower 3 Options 1-7, Cooling Tower 6 Options 1-5)

The Government will not consider an offer for quantities less than those specified for these items.

(b) If this is an invitation for bids, the Government will reject as **non-responsive** a bid that is not made on the total quantities for all of the items specified in paragraph (a) of this section.

(End of clause)

[END OF SECTION]

SECTION J - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS

J.1 List of Attachments

Attachment	Title	Date	No. of Pages
A.	SOW / Bid Issue Summary		6
B.	Lewis Field Specifications	January 11, 2012	550
C.	Lewis Field Drawings		131
D.	Plum Brook Specifications	February 13, 2012	511
E.	Plum Brook Drawings		22
F.	U.S. Department of Labor, Wage Determinations - Cuyahoga County - Building	January 6, 2012	6
G.	U.S. Department of Labor, Wage Determinations - Ohio - Building	February 10, 2012	63
H	Government Furnished Equipment: Valve Descriptions		2
I	Government Furnished Equipment: Valve Descriptions - ADDENDUM		1
J	Additional Reference Drawings		5

[END OF SECTION]