Housing Authority of the City of Pittsburgh

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July 2, 2019

Hazardous Material Abatement Authority Wide
RFP #600-20-19

ADDENDUM NO.3

This addendum issued July 2, 2019, becomes in its entirety a part of the Request for Proposals RFP #600-20-19 as is fully set forth herein:

Item 1: Q: Please clarify if the ACHD asbestos permitting costs are to be included in item number 1 of bid form? Or is this considered separate costs that would be reimbursed?

A: ACHD asbestos permitting costs are to be included per Task Order.

Item 2: Q: Please provide and clarify number 2 on the bid form (FORM OF BID)?

a. Please clarify encapsulate? Please provide specs for encapsulation materials.

b. The bid form needs to include a separate rate pricing for fittings and valves. Will this be amended to reflect pricing?

A: The intent of this RFP is to provide Vendors maximum flexibility for asbestos abatement needs that arise as a result of the individual Task Order(s). Encapsulation involves use of an Asbestos Binding Compound that acts as an asbestos sealant to capture friable Asbestos Containing Material (ACM), such as fireproofing and insulation material, and meet the requirements for actual encapsulation and removal of ACM as currently defined by the Environmental Protection Agency. Encapsulant types could include some or all types such as; lockdown, penetrating, and/or bridging encapsulants. The Allegheny County Health Department (ACHD) ultimately will approve the abatement plan.

Item 3: Q: Please provide Insulation specifications for Item number 3 on the bid form?

a. The bid form needs to include a separate rate pricing for fittings and valves. Will this be amended to reflect pricing?

A: SEE ATTACHMENT -1 for a typical Pipe Insulation Specification. This will subject to change per Task Orders. Include all fittings as required to meet the Task Order.

Item 4: Q: Please provide what degree or "standard" of removing lead based paint per item numbers 5 and 6 on the following on bid form?

a. Is this only Loose and flaky?

b. Is this total removal?

A:

a. Is this only Loose and flaky? Yes

b. Is this total removal? No, unless Task Order states total removal

Item 5: Q: Please provide full scope and specifications for item number 12 on bid form? Can this be deleted from bid form?

A: DELETE ITEM #12 from the Bid Form.

Item 6: Q: Please clarify or provide additional information for item number 13 on bid form? Suggest a square foot price in lieu of per house.

a. Would post testing and inspection be by HACP'S representative?

A: If Square foot price provided then provide the Per House/Unit per Bid Form.

(a) Yes, post testing and inspection be by HACP'S representative(s).

Item 7: Q: Could we be provided an excel format of bid form (FORM OF BID)?

A: No.

Item 8: The proposal due date, time, and location remain unchanged at July 8, 2019, at 2:00 P.M., at the HACP Procurement Dept., 100 Ross St. 2nd Floor, Suite 200, Pittsburgh, PA 15219.

END OF ADDENDUM NO. 3

Mr. Kim Detrick
Procurement Director/Chief Contracting Officer

7-2-19
Date

ADDENDUM # 3 – ITEM # 3: ATTACHMENT -1

TYPICAL HVAC INSULATION SPECIFICATIONS

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section includes insulation specifications for heating, ventilating and air conditioning piping, ductwork and equipment. Furnish and install all insulating materials and accessories as specified or as required for a complete installation.

The following types of insulation are specified in this section:

1. Pipe Insulation

1.3 QUALITY ASSURANCE

A. Insulation systems shall be applied by experienced contractors. Within the past five (5) years, the contractor shall be able to document the successful completion of a minimum of three (3) projects of at least 50% of the size and similar scope of the work specified in this section.

1.4 SUBMITTALS

A. Submit a schedule of all insulating materials to be used on the project, including adhesives, fastening methods, fitting materials along with material safety data sheets and intended use of each material. Include manufacturer's technical data sheets indicating density, thermal characteristics, jacket type, and manufacturer's installation instructions.

1.5 APPLICABLE PUBLICATIONS

ASTM B209 Aluminum and Aluminum Alloy Sheet and Plate
ASTM C165 Test Method for Compressive Properties of Thermal Insulations
ASTM C177 Heat Flux and Thermal Transmission Properties
ASTM C195 Mineral Fiber Thermal Insulation Cement
ASTM C240 Cellular Glass Insulation Block
ASTM C302 Density of Preformed Pipe Insulation
ASTM C303 Density of Preformed Block Insulation
ASTM C355 Test Methods for Test for Water Vapor Transmission of Thick Materials
ASTM C449 Mineral Fiber Hydraulic Setting Thermal Insulation Cement

1.6 ENVIRONMENTAL REQUIREMENTS

A. Do not store insulation materials on grade or where they are at risk of becoming wet. Do not install insulation products that have been exposed to water. Protect installed insulation work with plastic sheeting to prevent water damage.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Materials or accessories containing asbestos will not be accepted.

B. Use composite insulation systems (insulation, jackets, sealants, mastics, and adhesives) that have a flame spread rating of 25 or less and smoke developed rating of 50 or less.

C. Pipe insulation which is not located in an air plenum may have a flame spread rating not over 25 and a smoke developed rating no higher than 450 when tested in accordance with UL 723 and ASTM E84.

2.2 INSULATION TYPES

A. Insulating materials shall be fire retardant, moisture and mildew resistant, and vermin proof. Insulation shall be suitable to receive jackets, adhesives and coatings as indicated.

B. RIGID FIBERGLASS INSULATION: Minimum nominal density of 3 lbs. per cu. ft., and thermal conductivity of not more than 0.23 at 75 degrees F, minimum compressive strength of 25 PSF at 10% deformation, rated for service to 450 degrees F.

C. FIREPROOFING INSULATION: Mineral fiber with nominal density of 8 lbs. per cu. ft., flame spread index of 25, fuel contribution index of 0, and smoke developed index of 0, thermal conductivity of not more than 0.23 at 75 degrees F, rated for service of -120 degrees F to 1200 degrees F. Use rigid or semi-rigid board for duct insulations. Foil-scrim-polyethylene vapor barrier jacket, factory applied to insulation, maximum permeance of .02 perms.

2.3 JACKETS

A. PVC FITTING COVERS AND JACKETS (PFJ): White PVC film, gloss finish one side, semi-gloss other side, FS LP-535D, Composition A, Type II, Grade GU. Ultraviolet inhibited indoor/outdoor grade to be used where exposed to high humidity, ultraviolet radiation, in kitchens or food processing areas or installed outdoors. Jacket thickness to be minimum .02" indoors/.03"outdoors for piping 12" and smaller, .03" indoors/.04" outdoors for piping 15" and larger.

B. PVC covers and jackets have limited ability to resist water vapor transmission. On systems operating below 40 degrees F which use PVC covers or jackets, insulation must first be covered with low permeance vapor barrier mastic/fabric or vapor barrier tape.

C. ALL SERVICE JACKETS (ASJ): Heavy duty, fire retardant material with white Kraft reinforced foil vapor barrier, factory applied to insulation with a self-sealing pressure sensitive adhesive lap, maximum permeance of .02 perms and minimum beach puncture resistance of 50 units.

2.4 INSULATION INSERTS AND PIPE SHIELDS

A. Construct inserts with calcium silicate or polyisocyanurate (service temperatures below 300 degrees F only), minimum 140 psi compressive strength. Piping 12" and larger, supplement with high density 600 psi structural calcium silicate insert. Provide galvanized steel shield. Insert and shield to be minimum 180 degree coverage on bottom supported piping and full 360 degree coverage on clamped piping. On roller mounted piping and piping designed to slide on support, provide additional load distribution steel plate.

B. Where contractor proposes shop/site fabricated inserts and shields, submit schedule of materials, thicknesses, gauges and lengths for each pipe size to demonstrate equivalency to pre-engineered/pre-manufactured product described above. On low temperature systems, high density rigid polyisocyanurate may be substituted for calcium silicate provided high density rigid polyisocyanurate may be substituted for calcium silicate provided insert and shield length and shield gauge are increased to compensate for lower insulation compressive strength.

C. Pre-compressed 20# density molded fiberglass blocks, Hamfab or equal, of the same thickness as adjacent insulation may be substituted for calcium silicate inserts with one 1"x6" block for piping through 2-1/2" and three 1"x6" blocks for piping through 4". Submit shield schedule to demonstrate equivalency to pre-engineered/pre-manufactured product described above.

D. Wood blocks will not be accepted.

2.5 ACCESSORIES

A. All products shall be compatible with surfaces and materials on which they are applied, and be suitable for use at operating temperatures of the systems to which they are applied.

B. Adhesives, sealants, and protective finishes shall be as recommended by insulation manufacturer for applications specified.

C. Insulation bands to be 3/4 inch wide, constructed of aluminum or stainless steel. Minimum thickness to be .015 inch for aluminum and .010 inch for stainless steel.

D. Tack fasteners to be stainless steel ring grooved shank tacks.

E. Staples to be clinch style.

F. Insulating cement to be ANSI/ASTM C195, hydraulic setting mineral wool.

G. Finishing cement to be ASTM C449.

H. Fibrous glass or canvas fabric reinforcing shall have a minimum untreated weight of 6 oz./sq. yd.

I. Bedding compounds to be non-shrinking and permanently flexible.

J. Vapor barrier coatings to have maximum applied water vapor permeance of .05 perms.

K. Fungicidal water base coating

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that all piping and equipment are tested and approved prior to installing insulation. Do not insulate systems until testing and inspection procedures are completed and work is cleared by the Allegheny County Health Department (ACHD).

B. Verify that all surfaces are clean, dry and without foreign material before applying insulation materials.

3.2 INSTALLATION

A. All materials shall be installed by skilled labor regularly engaged in this type of work. All materials shall be installed in strict accordance with manufacturer's recommendations, building codes, and industry standards. Do not install products when the ambient temperature or conditions are not consistent with the manufacturer's recommendations. Surfaces to be insulated must be clean and dry.

B. Locate insulation and cover seams in the least visible location. All surface finishes shall be extended in such a manner as to protect all raw edges, ends and surfaces of insulation.

C. Install insulation with smooth and even surfaces. Poorly fitted joints or use of filler in voids will not be accepted. Provide neatly beveled and coated terminations at all nameplates, un-insulated fittings, or at other locations where insulation terminates.

D. Install fabric reinforcing without wrinkles. Overlap seams a minimum of 2 inches.

E. Use full length material (as delivered from manufacturer) wherever possible. Scrap piecing of insulation or pieces cut undersize and stretched to fit will not be accepted.

F. All pipe insulation shall be continuous through walls, ceiling or floor openings and through sleeves except where fire-stop or fire-safing materials are required. Vapor barriers shall be maintained continuous through all penetrations.

G. Provide a continuous unbroken moisture vapor barrier on insulation applied to systems noted below. Attachments to cold surfaces shall be insulated and vapor sealed to prevent condensation. Provide a complete vapor barrier for insulation on the following systems:

Cold Water Make-Up
Chilled Water
Piping with a surface temperature below 65 degrees F

3.3 PROTECTIVE JACKET INSTALLATION

A. PVC FITTING COVERS AND JACKETS (PFJ): Lap seams and joints a minimum of 2 inches and continuously seal PVC with welding solvent recommended by jacket manufacturer. Lap slip joint ends 4" without fasteners where required to absorb expansion and contraction. For sections where vapor barrier is not required and jacket requires routine removal, tack fasteners may be used. Secure PVC fitting covers with tack fasteners. For systems requiring a vapor barrier, apply a 1-1/2" band of mastic over ends, throat, seams and penetrations.

3.4 PIPING, VALVE, AND FITTING INSULATION

A. GENERAL: Install insulation with butt joints and longitudinal seams closed tightly. Provide minimum 2" lap on jacket seams and 2" tape on butt joints, firmly cemented with lap adhesive unless otherwise noted. Additionally secure with staples along seams and butt joints. Coat staples, longitudinal and transverse seams with vapor barrier mastic on systems requiring vapor barrier. Install insulation continuous through pipe hangers and supports with hangers and supports on the exterior of insulation. Where a vapor barrier is not required or where roller hangers are not being used, hangers and supports may be attached directly to piping with insulation completely covering hanger or support and jacket sealed at support rod penetration. Where riser clamps are required to be attached directly to piping requiring vapor barrier, extend insulation and vapor barrier jacketing/coating around riser clamp. Where insulated piping is installed on hangers and supports, the insulation shall be installed continuous through the hangers and supports. High density inserts shall be provided as required to prevent the weight of the piping from crushing the insulation. Pipe shields are required at all support locations. The insulation shall not be notched or cut to accommodate the supporting channels.

B. INSULATION INSERTS AND PIPE SHIELDS: Provide pipe shields at all hanger and support locations. Rigid insulation inserts shall be installed between the pipe and the insulation shields. Quantity and placement of inserts shall be according to the manufacturer's installation instructions, however the inserts shall be no less than 12" in length. Inserts shall be of equal thickness to the adjacent insulation and shall be vapor sealed as required for system. Provide insulation inserts and pipe shields at all hanger and support locations. Inserts may be omitted on 3/4" and smaller copper piping provided 12" long 22 gauge pipe shields are used.

C. FITTINGS AND VALVES: Fittings, valves, unions, flanges, couplings and specialties may be insulated with factory molded or built up insulation of the same thickness as adjoining insulation. Where the ambient temperature exceeds 150 degrees F, cover insulation with fabric

reinforcing and mastic. Where the ambient temperatures do not exceed 150 degrees, furnish and install PVC fitting covers.

D. MINERAL FIBER: Secure each 3' section with three stainless steel bands or five 16 gauge stainless steel or annealed copper tie wires evenly spaced and at ends. Twist wire ends, snip off excess and turn ends over into insulation. Stagger joints where more than one layer is used.

3.5 PIPING PROTECTIVE JACKETS

A. Provide a protective PVC jacket (PFJ) for the following insulated piping:

1. Piping exposed in finished locations

B. Provide a protective PVC (PFJ) or Fabric Reinforced Mastic (FMJ) jacket for the following insulated piping:

1. All piping within mechanical rooms

3.6 PIPE INSULATION SCHEDULE:

Provide insulation on new and existing remodeled piping as indicated in the following schedule:

Service	Insulation	Jacket	Thickness by Pipe Size
Heating Hot Water	Rigid Fiberglass	ASJ	1-1/2" (≤1.5") 2" (>1.5")

Note: On 1" or smaller hot water pipe run-outs to terminal unit coils the insulation thickness may be reduced to 1/2" on both the supply and return pipes within 4ft of the coil but not on the distribution system side of the temperature control valve.

Dual Temp Water	Rigid Fiberglass	ASJ	1-1/2" (≤1.5") 2" (>1.5")
Condensate Drain	Rigid Fiberglass	ASJ	1/2"

The following piping and fittings are not to be insulated: Piping unions for systems not requiring a vapor barrier

For systems with fluid temperatures 65° F or less, furnish and install removable elastomeric insulation covers, plugs or caps for all mechanical equipment and devices that require access by balancing contractors or service and maintenance personnel. Examples include but are not limited to: flow sensing devices, circuit setters, manual ball valve air vents, drain valves, blow-down valves, pressure/temperature test plugs, grease fittings, pump bearing caps, equipment labels, etc. Covers shall be tight fitting to ensure a complete vapor barrier.

END OF SECTION