[redacted]

NOTE: Information in this waiver may have been redacted or removed due to issues of proprietary business information or incompatibility with Federal accessibility requirements. To request the information redacted for purposes of accessibility requirements, please email CWSRFWaiver@epa.gov.

June 7, 2024

Ms. Rebecca Lanahan, P.E.
NYS Environmental Facilities Corporation
625 Broadway
Albany, NY 12245

Re: RFB-RC-SWR-2022-06
Union Hill & Tallman Pump Station Upgrade
Rockland County, NY

Subject: AIS Waiver Request – Knife Gate Valves

Dear Ms. Lanahan,

The above referenced project is subject to American Iron and Steel (AIS) requirements. The specified knife gate manufacturer [redacted] has notified us that they are currently experiencing extended lead times at 50 to 60 weeks after shop drawing approval on the subject valves. These delays are a combination of extreme backlog levels at their manufacturing facilities and their domestic foundry supplying the product. Additionally, due to unanticipated quality challenges with the domestic foundry, [redacted] has been forced to move production of this product line to new domestic foundries for current and future orders. [redacted] is in the process of partnering with other foundries to continue their mission to only provide top quality products. Verification of the new supplier's quality and capability will take several months to ensure that their quality standards have been met or exceeded. [redacted] can make a knife gate valve that does not meet AIS requirements with a lead time of 8 weeks. The Non-AIS compliant knife gate valves have the same materials of construction as the AIS compliant knife gate valves.

The project duration is 719 days. Notice to proceed date was march 1st, 2024. In order to meet the project deadline, we would need to have the valves on site by January 2025. Even if we released the AIS knife gate valves today, they would not be delivered until May 16, 2025, which would negatively affect the overall project schedule. [redacted] was the engineer specified manufacturer for the knife gate valves. Alternative manufacturers would require lengthy submittal preparation and review time which would be a detriment to the schedule. Alternate manufacturers would require an executed purchase order to prepare engineering submittals required to prove that their product meets or exceeds the specification. The specification section and relevant plans are attached.

Equipment	Specified Manufacturer	Quantity	Unit Cost	Total Cost
Knife Gate Valve	[redacted]	2 EACH	[redacted]	[redacted]

Supplier: [redacted]

Therefore, we request an AIS waiver for the knife gate valves on this project. We have sourced all other materials on this project to be in full compliance with AIS requirements.

If you have any questions or comments regarding this waiver request, please do not hesitate to contact me at [redacted].

[redacted]

Thank you,

Keith Robinson

Keith Robinson
Project Manager
[redacted]

SECTION 15100

PROCESS VALVES

PART 1 GENERAL

1.01. DESCRIPTION OF WORK

A. Furnish, install, and test aboveground process valves complete with operators and all other required accessories in accordance with the Contract Documents.

1.02. REFERENCES

A. ANSI/AWWA C500 – Metal-Seated Gate Valves for Water Supply Service

B. ANSI/AWWA C507 – Ball Valves 6 inches through 48 inches

C. ANSI/AWWA C508 – Swing Check Valves for Waterworks Service 2 inches through 24 inches NPS

D. ANSI/AWWA C510 – Double Check Valve Backflow Prevention Assembly

E. ANSI/AWWA C512 - Air-Release, Air/Vacuum and Combination Air Valves for Waterworks

F. ANSI/AWWA C511 – Reduced Pressure Principle Backflow Prevention Assembly

G. ANSI/AWWA C520 – Knife Gate Valves 2 inches through 96 inches

H. ANSI/AWWA C542 – Electric Motor Actuators for Valves and Slide Gates

I. ANSI/AWWA C550 – Protective Interior Coatings for Valves and Hydrants

J. ASTM A126 – Gray Iron Castings

K. ASTM A48 – Gray Iron Castings for Valves, Flanges and Pipe Fittings

1.03. SUBMITTALS

A. Provide in accordance with Sections 01300, Submittals; 01640, Equipment-General; and as supplemented herein. Submittals shall include, but not be limited to, the following:

1. Shop Drawings

a. Shop drawings shall indicate types of valves, hydrants, appurtenances and actuators proposed for the project including conformance to ANSI/AWWA codes and related details for field assembly, operations and maintenance. Contractor shall identify the service (i.e., digested sludge, polymer, etc.) that the proposed equipment is intended for on the shop drawing.

b. For those valves with motors and actuators, submittals shall include dimensions and orientation of motors and actuators, size and quantity of conduit taps, complete wiring diagrams showing all provided options and inputs/outputs from the actuator assembly, input/output matrix of all available registers and corresponding system parameters that will be made available over the actuator's communication module.

c. Certification that all valve components that will come in contact with the liquid are fully compatible with the liquid inside of the valve and outside the valve.

2. Shop Test Results - Submit test results if shop testing is required.

3. Certification of equipment compliance.

4. Field Testing Results - Submit test results if field testing is required.

5. Operations and maintenance manuals.

6. Valve Directory

a. A preliminary valve directory shall be submitted by the Contractor before construction begins. The Contractor is responsible for maintaining an accurate record of all valves installed during the project.

b. A final valve directory shall be provided listing all valve numbers, the valve function, and location which corresponds to the valve tags. The directory shall be typewritten and framed with a glass cover and delivered to the Owner after inspection and approval by the Engineer.

PART 2 PRODUCTS

2.01. GENERAL

A. The design working pressure shall be 200 psig for valves 12 inches NPS in diameter and smaller, and 150 psig for valves 16 inches NPS in diameter and larger.

B. All valves shall be compatible with all the materials the valves shall be exposed to.

C. All valves shall have the manufacturer's name monogrammed or initialed by the manufacturer thereon and shall be identified by catalog numbers.

D. Valve size, type of valve, joint type, class, lining, coatings shall be installed as listed herein or as shown on the Contract Drawings.

E. Valves shall be of standard manufacturer and of highest quality, both as to material and workmanship, conforming to the latest edition of AWWA standards specified.

F. All valves shall be provided with flanged or screwed ends as described herein or shown on the Contract Drawings.

G. All surface forming joints or bearing surfaces shall be machined to a perfect fit.

H. All disc and seat rings shall be carefully and thoroughly secured in place with the iron castings machined where the rings are bare and the backs of the rings machined all over. After the rings have been fastened securely in place, the front shall be machined all over to a perfectly true and smooth bearing surface.

I. All valves with non-rising stems shall have valve position indicators.

J. Valves shall open counterclockwise (left) unless otherwise specified.

K. Ferrous metal valves shall be painted in accordance with Section 09900, Painting.

L. All new motorized actuators on motorized valves shall be of the same manufacturer.

2.02. RESILIENT SEATED GATE VALVES

A. Gate valves 2 inches and smaller shall be bronze gate valves with rising stem, double wedge disc, screwed bonnet, screwed ends, 125-lb. rating and shall be repackable under pressure in full open position.

B. All gate valves 2 inches and smaller shall be [redacted] or approved equal.

C. All other gate valves shall conform to the latest AWWA Standard and shall be suitable for wastewater applications. Except where otherwise indicated on the Contract Drawings.

D. The valves shall have a cast iron body, bonnet and wedge. The wedge shall be totally encapsulated with rubber.

E. The sealing rubber shall be permanently bonded to the wedge to meet ASTM tests for rubber metal bond ATSM D249.

F. Valves shall be supplied with O-Ring seals at all joints.

G. The valves shall be non-rising (NRS), unless otherwise noted in the Contract Drawings.

H. Stems for NRS assemblies shall be cast bronze with integral collars in full compliance with AWWA. OS&Y (rising stems) shall be of bronze. All stems shall operate with bronze stem nuts, independent of stem (in NRS valves). NRS stems shall have 2 O-Rings located above thrust collar and O-Ring below. All stem O-Rings shall be replaceable with valve fully opened and subjected to full pressure. The NRS stems shall also have 2 low torque thrust bearings located above and below stem collar to reduce friction during operation.

I. Waterway shall be smooth, unobstructed and free of all pockets, cavities and depressions in the seat area. Valves shall accept a full size tapping cutter.

J. The body, bonnet and stuffing plate shall be coated with fusion bonded epoxy, both interior and exterior on body and bonnet. Epoxy shall be applied in accordance with AWWA C550.

K. Each valve shall have a maker's name, pressure rating, and year in which it was manufactured cast in the body. Prior to shipment from the factory, each valve shall be tested by hydrostatic pressure equal to requirements of AWWA.

L. All interior gate valves shall be equipped with handwheel or chain and wheel operators unless otherwise specified.

1. Handwheel or chain and wheel operators shall be replaceable with 2-inch operating nuts without replacing the valve stem or removing the bevel gears.

M. Gate valves shall be designed to be leak-tight with full pressure on either face with no pressure on the opposite face.

N. All internal parts shall be accessible without removing the body from the line.

O. Valves shall have all brass components cast and assembled in the USA and shall be manufactured by [redacted] or approved equal.

2.03. KNIFE GATE VALVES

A. Provide knife gate valves where indicated on the Contract Drawings.

B. Knife Gate valves shall be cast 316 stainless steel and bidirectional. Any body or gate material other than 316 Stainless Steel will be rejected.

C. Knife Gates shall meet the American Iron and Steel Act without material substitution.

D. Knife Gates shall be made in America.

E. Port area shall be 100% of nominal pipe area at all points of the valve.

F. Gate edges shall be machined, finished, and rounded. The gate faces shall be finish ground.

G. Valves shall be of a perimeter seat design and the seat shall provide guiding for the gate.

H. General:

1. Knife Gate valves shall be one piece cast 316 Stainless Steel.

2. Valves shall be 150 psi (1030 kPa) for 2-28” (50-700mm) and 100 psi (690 kPa) available for 30” and 36” (750mm and 900mm).

3. Cold Working Pressure valve rating shall meet or exceed MSS SP-81.

4. Face-to-face dimension shall meet MSS SP-81 for knife gate valves.

5. Exclusive Premium Packing System shall fit a rounded machined packing chamber. The Exclusive Premium Packing System shall consist of multiple layers of packing with anti-extrusion guides. The packing gland shall match the valve body or (specify).

6. The fasteners shall be stainless steel.

7. Valve inside port diameter shall be equal to ANSI B36.10 STD pipe inside diameter.

8. End Connection - Flanged, Drilled to ASME B16.1 Class125/150

a. Raised faces shall be full width per ASME B16.20 standards for spiral-wound gaskets.

9. Resilient Seat shall be capable of bubble-tight bi-directional shutoff to the full pressure rating of the valve in both directions and provide shutoff on dead end service.

10. Resilient seat shall be a one-piece rubber molded seat with seat pucks at the top and an encapsulated full metal reinforcement insert in 316 stainless steel for rigidity.

11. Seat pucks shall be locked into a machined pocket in the bottom of the packing chamber and not interfere with the integrity of the packing chamber.

12. The perimeter seat shall be locked into the valve body in a dovetail groove.

13. All Actuators will be mounted, adjusted and tested at the valve manufacturers facility. This shall be evidenced by witness test of the entire assembly, at the engineer's discretion, at the manufacturer's facility.

I. Materials of Construction:

1. Body and gate: One piece cast 316 Stainless Steel.

a. Material substitutions are not acceptable.

2. Gate:

a. 316 Stainless Steel

b. Material substitutions are not acceptable.

3. Packing: PTFE Braided Packing to 500° F. (260° C.); (pH Range 0-14)

4. Seat: Chloroprene, BUNA or EPDM to 250° F. (122° C.)

J. Actuators:

1. Manually actuated valves shall have handwheel actuators. The manual operated handwheel actuator yoke shall be one piece 304 stainless steel. The yoke sleeve shall be aluminum

K. Knife Gate Valves shall be manufactured by [redacted] approved equal.

2.04. PLUG VALVES

A. Plug Valves shall be rectangular port, resilient seated and body and bonnet shall be of the same material.

B. Port area shall be 100% of nominal pipe area at all points of the valve.

C. General:

1. All plug valves shall be of rectangular port, eccentric type unless otherwise specified.

2. Exposed valves shall have flanged ends.

3. Design Working Pressures:

a. Valves 12 inch and Smaller: 175 psig

b. Valves 14 inch through 72 inch: 150 psig

4. Valves shall provide drip tight bidirectional shut off at the design working pressure, operating pressures and test pressures.

5. The plug shall have a cylindrical seating surface eccentrically offset from the center of the shaft. Plug shall not contact the seat until at least 90% closed:

a. The interface between the plug face and body seat, with the plug in the closed position, shall be externally adjustable in the field with the valve in the line under pressure.