Willamette Water Supply
Our Reliable Water

NOTE: The referenced attachments with project diagrams, schedules, and supplier correspondence are in formats that do not meet the Federal accessibility requirements for publication on the Agency's website. Hence, these exhibits have been omitted from this waiver publication. They are available upon request by emailing CWSRFWaiver@epa.gov.

January 11, 2022

Environmental Protection Agency
Water Infrastructure Division
Office of Wastewater Management
Attention: Sayana Tsatsralt
Portfolio Manager/WIFIA Program
via email

RE: Willamette Water Supply System, Tualatin Valley Water District (Loan #N18167OR) and City of Hillsboro, Oregon (Loan #N18105OR); American Iron and Steel Waiver Request for 10-inch Backflow Prevention Assemblies

Dear Ms. Tsatsralt:

On behalf of the Tualatin Valley Water District and City of Hillsboro, Oregon (Borrowers), this letter is submitted to request a project waiver pursuant to the "American Iron and Steel" requirements for the purchase and installation of *one (1)* 10-inch reduced pressure zone backflow prevention assembly for use on the Reservoir project [RES_1.0], and *seven (7)* 10-inch double check valve backflow prevention assemblies for use on the Water Treatment Plant project [WTP_1.0]. Both are component projects of the Willamette Water Supply System (WWSS) project located in Washington and Clackamas counties, Oregon. The WWSS project will establish a new, seismically-resilient water supply for the Project Partners and other communities.

As the projects are funded by Water Infrastructure Finance and Innovation Act (WIFIA) loans, the American Iron and Steel (AIS) requirements apply to the project. According to the AIS requirements, recipients may request and receive a waiver to the AIS requirement in certain circumstances. For this project, we hereby request a waiver on the basis that "Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality," which is condition number two as listed in the EPA's AIS guidance documents.

JUSTIFICATION OF USE – WTP_1.0: The WTP_1.0 project requires seven 10-inch double check valve backflow prevention assemblies, which will be installed at the water treatment plant located in Sherwood, Oregon. The double check valve backflow prevention assemblies are required to prevent cross contamination with the connections to the City of Sherwood water supply system and also for connections within the water treatment plant.

The project requirements for the 10-inch double check valve backflow prevention assemblies include the following:

1. Comply with AWWA C510.
2. Configuration: Two independently operating check valves with intermediate atmospheric vent.
3. Materials:
   a. Body: Epoxy coated steel

   b. Internal Components: Stainless steel
   c. Springs: Stainless steel
   d. Elastomers: Buna nitrile
4. Connections: Flanged
5. End Valves: Gate, OS&Y
6. Furnish assembly with strainer and four test cocks
7. Size: Match connecting pipes
8. Working Temperature: As indicated on the Pipe Schedule
9. Pressure Rating: As indicated on the Pipe Schedule psig

JUSTIFICATION OF USE – RES_1.0: The RES_1.0 project requires one 10-inch diameter reduced pressure zone (RPZ) backflow prevention assembly, which will be installed at the reservoir site in Beaverton, Oregon, located downstream of the Tualatin Valley Water District (TVWD) potable water supply meter vault. The RPZ backflow prevention assembly is required to prevent cross contamination between the connection to the TVWD water supply system and the onsite potable water supply points.

The project requirements for the 10-inch RPZ backflow prevention assembly include the following:

1. Comply with AWWA C511; ASSE Standard 1013; and USC manual for Cross-Connection Control, 8th Edition
2. Designed to prevent the reverse flow of liquids in a plumbing system due to backpressure or back siphonage where there is a potential health hazard
3. Configuration: Inline, horizontal, vault-protected. The assembly shall consist of isolation valves, two independent check valves, and differential relief valve / air-gap drain fitting. The assembly shall automatically reduce the pressure in the zone between the check valves. In the event that the reduced pressure is not maintained, the differential relief valve shall open, maintaining the proper zone differential
4. Materials:
   a. Body: Epoxy coated cast iron
   b. Internal Components: Stainless steel
   c. Lead Free: YES; ANSI/NSF 61, Annex G for low lead
5. End Connections: Flanged
6. End Valves: Gate, OS&Y or NRS
7. Furnish assembly with Lead Free copper silicon alloy test cocks
8. Max. Working Temperature: 110 degrees F
9. Pressure Rating: 175 psi

NON-AVAILABILITY: The engineer of record for RES_1.0 is [redacted], and for WTP_1.0 is [redacted]. The engineering firms, general contractors, and WWSS program management staff evaluated and confirmed the non-availability of the domestic construction materials for which the waiver is sought. The possibity of design alternatives was discussed, but backflow prevention is required by the Oregon Health Authority.

The following is a list of manufacturers that were contacted. Representatives of these manufacturers all indicated that their company does not manufacture an AIS-compliant backflow prevention assembly in

this size and that they were unaware of any other manufacturers that can meet AIS requirements for this particular device.

Manufacturers Contacted

- [redacted]
- [redacted]
- [redacted]

In addition, we have attached the findings of market research from the EPA AIS team.

COST:

PROJECT	PRODUCT DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
WTP_1.0	10" FNW_1517 and 1518	2	[redacted]	[redacted]
WTP_1.0	10" PTW_1833 and 1834	2	[redacted]	[redacted]
WTP_1.0	10" NPW_1831 and 1832	2	[redacted]	[redacted]
WTP_1.0	10" PTW_8080	1	[redacted]	[redacted]
RES_1.0	Reduced Pressure Zone Backflow Prevention Assembly	1	[redacted]	[redacted]
	TOTAL COST			[redacted]

SCHEDULE AND LEAD TIME:
For the Water Treatment Plant, lead time is 12 weeks, with install scheduled for 2024.
For the Reservoir project, lead time is 10 to 12 weeks, with install scheduled for Spring 2023.

SIMILAR APPROVED WAIVER REQUESTS: EPA's AIS website (https://www.epa.gov/cwsrf/state-revolving-fund-american-iron-and-steel-ais-requirement) indicates that AIS waiver requests have been granted for backflow preventers of various sizes that are substantially the same as this request. These waivers were for projects in:

- Passaic Valley Sewerage Commission in New Jersey (September 24, 2020)
- City of Post Falls, Idaho (September 27, 2021)
- New River Valley Regional Water Authority in Virginia (November 11, 2021)

SUMMARY: Based on the information discussed herein, we are requesting that backflow prevention assemblies as specified and proposed be allowed for this project:

- [redacted]
- [redacted]
- [redacted]
- Or equal

Please let us know of any questions or comments after reviewing this request. Thank you for your consideration in this matter.

Sincerely,

David Kraska, P.E.
WWSS Program Director

Enclosures:
WIFIA AIS Product Research Results
WWSP Summary Construction Schedule
Specification Section 40 05 67.16 – WTP_1.0
Specification Section 22 11 19 – RES_1.0

cc: Jenn Minton
Faride Abzade
Matt Gribbins
Corianne Burnett
Jeremy Taylor