

**NOTE:**

This waiver submission may include references to proprietary items and brand name products. These references have been retained to provide context for the waiver submission. EPA does not evaluate a waiver based on a proprietary item but reviews the performance-based specifications for the project/products. As such, any references to brand or proprietary items are reviewed on an "or equal" basis by EPA.

Items and pages may have been intentionally redacted or excluded by the EPA. Contact [WIFIAWaiver@epa.gov](mailto:WIFIAWaiver@epa.gov) for more information if necessary.

# Willamette Water Supply

## *Our Reliable Water*

August 4, 2023

Environmental Protection Agency  
Water Infrastructure Division  
Office of Wastewater Management  
Attention: Sayana Murakami  
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 6-inch Reduced Pressure Zone Backflow Prevention Assemblies

Dear Ms. Murakami:

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 three (3) 6-inch reduced pressure zone backflow prevention assemblies for use on the Water Treatment Plant project [WTP\_1.0]. The WTP is a component project 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:** The WTP\_1.0 project requires three 6-inch reduced pressure zone 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 6-inch reduced pressure zone backflow prevention assemblies include the following:

- Comply with ASSE 1013.
- Configuration:
  - a. Two independently operating, spring-loaded check valves in series.
  - b. Diaphragm-type differential pressure-relief valve located between check valves.
  - c. Third check valve shall open under back pressure in case of diaphragm failure.
  - d. Supplied with shut-off valves and ball type test cocks.
- Materials:
  - a. Body: Bronze, 2-inch and smaller; Ductile iron or epoxy coated steel, 2.5-inches and larger.
  - b. Internal Components: Stainless steel.
  - c. Seal Rings: EPDM.
  - d. Sensing Hose Line: Braided stainless steel.
- Connections: Flanged, ASME B16.1, Class 125.
- Furnish assembly with two gate valves, strainer, and four test cocks.
- Size: Match connecting pipes.
- Working Temperature: As indicated on the Pipe Schedule.
- Pressure Rating: As indicated on the Pipe Schedule psig.
- Accessories:
  - a. Strainer: Wye type
  - b. End Valves: Gate, OS&Y
  - c. Air gap, bronze

**NON-AVAILABILITY:** The engineer of record for WTP\_1.0 is CDM Smith. The engineering firm, general contractor, and WWSS program management staff evaluated and confirmed the non-availability of the domestic construction materials for which the waiver is sought. The possibility 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.

MANUFACTURER/SUPPLIER INFORMATION			
Vendor Name	Contact Person	Contact Information	Response
Ferguson	Blake Henderson	<a href="mailto:blake.henderson@ferguson.com">blake.henderson@ferguson.com</a>	AIS not available for 6" backflow assemblies from Zurn, Watts, or Ames.
Hollabaugh Brothers & Associates	Brennan Nelson	<a href="mailto:bnelson@hbarep.com">bnelson@hbarep.com</a>	Watts 6" rbbp does not comply with AIS
Hollabaugh Brothers & Associates	Lekenyada Winston	<a href="mailto:lwinston@hbarep.com">lwinston@hbarep.com</a>	Ames 6" rbbp does not comply with AIS
Stone/Drew - Ashe & Jones	Randy Corey	<a href="mailto:Randy@sdajnw.com">Randy@sdajnw.com</a>	Zurn 6" rbbp does not comply with AIS

**COST:**

PROJECT	PRODUCT DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
WTP_1.0	ZURN 6" Backflow Preventer: Backflow preventer assembly OS&Y, Strainer, and Air gap included	3	\$REDACTED	\$REDACTED

**SCHEDULE AND LEAD TIME:**

The lead time is five days, with install scheduled for December 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)

Please note that the WWSP has already been approved a waiver for use of reduced pressure zone backflow prevention assemblies in a ten-inch size (waiver attached for reference).

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

- Ames Fire & Waterworks; a WATTS Brand
- WATTS
- Zurn Industries, LLC.
- 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*

David Kraska, P.E.  
WWSS Program Director

Enclosures:

[Redacted]

[Redacted]

Specification Section 40 05 67.13

cc: Matt Gribbins  
Kristina McLean  
Doug Shermack

## SECTION 40 05 67.13 - REDUCED-PRESSURE ZONE BACKFLOW PREVENTERS FOR PROCESS SERVICE

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes: Reduced-pressure zone backflow preventers.
- B. Related Requirements:
  - 1. Section 05 45 10 "Hangers and Supports for Process Piping and Instrumentation": Anchors and supports.
  - 2. Section 40 05 51 "Common Requirements for Process Valves."

#### 1.2 DEFINITIONS

- A. Outside Screw and Yoke (OS&Y) Valve: A valve in which the operating screw is driven by a threaded nut that is built into the handle.

#### 1.3 SUBMITTALS

- A. Section 01 33 00 "Submittal Procedures": Requirements for submittals.
- B. Product Data: Submit manufacturer catalog information.
- C. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- D. Manufacturer Instructions: Submit special procedures and setting dimensions.
- E. American Iron and Steel (AIS) step certification letter(s) or De Minimis Waiver Tracking spreadsheet. Refer to Specification Section 01 11 00.
- F. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
- G. Qualifications Statement:
  - 1. Submit qualifications for manufacturer.

#### 1.4 CLOSEOUT SUBMITTALS

- A. Section 01 77 00 "Closeout."
- B. Project Record Documents: Record actual locations of reduced-pressure zone backflow preventers.

- C. Field testing submittals.

## 1.5 QUALITY ASSURANCE

- A. Materials in Contact with Potable Water: Certified to NSF Standards 61 and 372.
- B. Comply with ASSE 1013.

## 1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum three years' documented experience.

## 1.7 EXISTING CONDITIONS

- A. Field Measurements:
  - 1. Verify field measurements prior to fabrication.
  - 2. Indicate field measurements on Shop Drawings.

## 1.8 WARRANTY

- A. Section 01 77 00 "Closeout": Requirements for warranties.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Comply with Section 01 60 00 "Delivery, Storage and Handling" and Section 40 05 51 "Common Requirements for Process Valves."

# PART 2 - PRODUCTS

## 2.1 REDUCED-PRESSURE ZONE BACKFLOW PREVENTERS

- A. Manufacturers: In addition to the list of manufacturers under consideration,
  - 1. Ames Fire & Waterworks; a WATTS Brand.
  - 2. WATTS.
  - 3. Zurn Industries, LLC.
  - 4. Or equal.
- B. Description:
  - 1. Comply with ASSE 1013.

2. Configuration:

- a. Two independently operating, spring-loaded check valves in series.
- b. Diaphragm-type differential pressure-relief valve located between check valves.
- c. Third check valve shall open under back pressure in case of diaphragm failure.
- d. Supplied with shut-off valves and ball type test cocks.

3. Materials:

- a. Body: Bronze, 2-inch and smaller; Ductile iron or epoxy coated steel, 2.5-inches and larger.
- b. Internal Components: Stainless steel.
- c. Seal Rings: EPDM.
- d. Sensing Hose Line: Braided stainless steel.

- 4. Connections: Flanged, ASME B16.1, Class 125.
- 5. Furnish assembly with two gate valves, strainer, and four test cocks.
- 6. Size: Match connecting pipes.
- 7. Working Temperature: As indicated on the Pipe Schedule.
- 8. Pressure Rating: As indicated on the Pipe Schedule psig.

C. Accessories:

- 1. Strainer: Wye type.
- 2. End Valves: Gate, OS&Y.
- 3. Air gap, bronze.

2.2 SOURCE QUALITY CONTROL

- A. Comply with Section 01 45 00 "Quality Control and Assurance" and Section 40 05 51 "Common Requirements for Process Valves."
- B. Execute source testing as specified in Part 3.
- C. UL and FM approved.

PART 3 - EXECUTION

3.1 SOURCE TESTING

- A. Comply with Section 01 75 17 "Commissioning" and Section 40 05 51 "Common Requirements for Process Valves."
- B. Factory Test Method: AWWA C511.

### 3.2 FIELD QUALITY CONTROL

- A. Comply with Section 01 75 17 “Commissioning” and Section 40 05 51 “Common Requirements for Process Valves.”
- B. Installation in accordance with AWWA C511.
- C. Installation testing to be conducted by Contractor’s personnel possessing valid Oregon Health Authority Backflow Assembly Tester certification only.

### 3.3 INSTALLATION

- A. Install at locations shown on Drawings and in accordance with:
  - 1. AWWA C511.
  - 2. Section 40 05 51 “Common Requirements for Process Valves.”
  - 3. Manufacturer instructions.
  - 4. Oregon Department of Health local code requirements.
- B. Do not install in vertical position.

### 3.4 FIELD TESTING

- A. As specified in Section 40 05 51 “Common Requirements for Process Valves.”
- B. As required by Oregon Health Authority and local code requirements.

### 3.5 OWNER TRAINING

- A. Comply with Section 01 75 17 “Commissioning” and Section 40 05 51 “Common Requirements for Process Valves.”

END OF SECTION 40 05 67.13