



This waiver request was submitted to the EPA by the State of South Dakota and only applies to the project in the subject line. All supporting documentation included as part of this waiver request were submitted by the recipient to provide an appropriate level of detail and context for the submission. There may be documents with project diagrams, schedules, and correspondence 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 on request by emailing DWSRFWaiver@epa.gov.

February 18, 2026

Attn: Andrew Bruels
South Dakota Department of Agriculture and Natural Resources

Dear Bruels,

As we discussed, we are requesting a waiver from the American Iron and Steel Act for one valve on the Brookings Municipal Utilities (BMU) Water Treatment Plant (WTP) Project. This valve is being installed to eliminate an unacceptable condition on the lime slurry line encountered after the WTP was placed in service. The WTP has two lime silos and slaker systems with a common slurry feed and return line loop system. When selecting the slaker to feed the loop, there is a wye with two plug valves and the valves are positioned to direct the online slaker to the loop, while isolating the other side. This layout is shown on the attached plan sheet and an enlarged version also attached. After the WTP was treating water for a couple months, it was desired to switch over to the other slaker to run it through its demonstration period. When attempting that it was discovered that the isolated leg of the wye had plugged with lime and would not break free. This was an unforeseen condition that would undoubtedly cause future operational issues if not corrected. Working with the Contractor and Owner, it was decided to use a three-way plug valve in lieu of two separate plug valves which will allow for elimination of the wye and the associated plugging issue. This proposed change is described and shown in the attached enlarged section and photo.

The reason behind this waiver request is solely due to delivery time. The delivery time for an AIS compliant valve would be approximately 14 weeks longer than a non-compliant valve. The Contractor [REDACTED] contacted three additional manufacturers of three-way plug valves and their delivery times were quoted to be two to six weeks longer than the shortest delivery time quoted by [REDACTED] for an AIS compliant valve. Those other valve manufacturers contacted were; [REDACTED].

The issue with the longer lead time for an AIS compliant valve is that it would not have arrived in time for installation until well after the peak water demand season is winding down. BMU needs this modification installed prior to that peak summer demand such that both lime feed systems are available for redundancy and uninterrupted treatment capacity. The arrival time for the non-AIS compliant valve is scheduled for Mid-May whereas the AIS compliant valve, approximately 14 weeks later, would arrive around the third week of August. We hope you can understand that due to the extreme need for this modification to occur before the summer water demand peak, the non-AIS compliant valve has been ordered, as waiting for the waiver request to be considered would also result in the valve not being available until after its need during the peak water demand. The other piping modifications being made with this modification are AIS compliant as are the two plug valves being

replaced. We are requesting the waiver for this valve such that it could be included in the project. If the waiver is denied, BMU would need to handle it as a maintenance item outside of the project. The current WTP contract amount is [REDACTED]. The cost of the valve itself is [REDACTED] or approximately [REDACTED] % of the project. Attached is the submittal information for the [REDACTED] three-way plug valve, which will be manually operated with handwheels, as well as the sections and photo mentioned previously.

Sincerely,
HDR Engineering

Joeseeph Honner, PE
Water Program Manager

SECTION 40 05 62 PLUG VALVES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Plug valves.
- B. Related Specification Sections include but are not necessarily limited to:
 - 1. Section 40 05 51 - Valves - Basic Requirements.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. American Society of Mechanical Engineers (ASME):
 - a. B16.1, Gray Iron Pipe Flanges and Flanged Fittings: Classes 25, 125 and 250.
 - 2. ASTM International (ASTM):
 - a. A126, Standard Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings.
 - b. A536, Standard Specification for Ductile Iron Castings.
 - c. D2240, Standard Test Method for Rubber Property-Durometer Hardness.
 - 3. American Water Works Association (AWWA):
 - a. C517 Resilient-Seated Cast-Iron Eccentric Plug Valves

1.3 SUBMITTALS

- A. Shop Drawings:
 - 1. See Specification Section 40 05 51.
- B. Contract Closeout Information:
 - 1. Operation and Maintenance Data:
 - a. See Specification Section 01 78 23 for requirements for the mechanics, administration, and the content of Operation and Maintenance Manual submittals.
 - 2. See Specification Section 40 05 51.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with the Contract Documents, the manufacturers listed under the specific valve types are acceptable.

2.2 NON-LUBRICATED ECCENTRIC PLUG VALVES

- A. Manufacturers:
 - 1. [REDACTED].
 - 2. [REDACTED].
 - 3. [REDACTED].
 - 4. [REDACTED].
- B. Materials:
 - 1. Body: Cast-iron ASTM A126, Class B.
 - 2. Plug: One or two-piece construction ductile iron, ASTM A536 65-45-12 or cast iron, ASTM A126 Class B.
 - 3. Plug facing: Grease and/or petroleum-resistant resilient Neoprene or Buna-N compound, 70 Type A durometer hardness per ASTM D2240.

4. Shaft bearing bushings: Permanently lubricated TFE or Delrin sleeve type stainless steel or bronze.
5. Valve seats: Welded-in overlay of 90% nickel, (minimum 1/8 IN thick).
6. Stem seal: per AWWA C517, Section 4.4.7.

2.3 LUBRICATED SEAL PLUG VALVES (NATURAL GAS APPLICATIONS)

A. Manufacturers:

1. [REDACTED].
2. [REDACTED].
3. [REDACTED].

B. Materials:

1. Body: Cast iron ASTM A126, Class B.
2. Plug: Cast iron ASTM A126, Class B.
3. Plug facing: Teflon on tapered plug.
4. Valve seats: Gas-resistant lubricant/sealant.

2.4 NON-LUBRICATED ECCENTRIC PLUG (HEATING-COOLING WATER APPLICATIONS)

A. Manufacturers:

1. [REDACTED].
2. [REDACTED].
3. [REDACTED].

B. Materials:

1. Body: Cast iron, ASTM A126, Class B.
2. Plug: Bronze or nickel-plated cast iron.
3. Bearings: Bronze or nickel.
4. Plug seal: Isobutene-isoprene (250 DEGF).

2.5 ACCESSORIES

A. Refer to Drawings and valve schedule for type of actuator.

1. Furnish actuator integral with valve.

B. Refer to Specification Section 40 05 51 for actuator requirements.

2.6 DESIGN REQUIREMENTS

A. Non-Lubricated Eccentric Plug Valves:

1. Port area:
 - a. Valves 4 IN through 20 IN: Equal to or exceed 80% of full pipe area.
 - b. Valves greater than 20 IN: 100% equivalent full pipe area.
2. Valve body: Fitted with bolted bonnet.
3. End connections: See Specification Section 40 05 51.
4. Stem seal: Adjustable and replaceable without disassembling valve or bonnet.
5. Designed for seating drip tight in any flow direction.
6. Rating:
 - a. 1/2 through 12 IN, 175 PSI working pressure.
 - b. 14 through 36 IN, 150 PSI working pressure.
 - c. Three-way valves, 125 PSI working pressure.
7. Actuator:
 - a. Actuator gearing in enclosure suitable for running in oil with seals on shaft to prevent entry of dirt or water.
 - b. Positive identification on actuator indicating valve position.
 - c. Adjustable stop to set closing torque.

- B. Lubricated Plug Valves (Natural Gas):
 - 1. Pressure lubricated valve with sealed ports and grooves.
 - a. Re-seatable under full pressure in any position.
 - 2. Pressure rating: 200 PSI WOG.
 - 3. Port area: Minimum 60% of pipe area.
 - 4. Acceptable to local gas company.
- C. Non-Lubricated Eccentric Plug Valve-(HVAC):
 - 1. Port area: Valves 1/2 IN through 2-1/2 IN: Equal to or exceed 100% of full pipe area.
 - 2. Valve body: Fitted with threaded bonnet or bolted bonnet.
 - 3. End connections:
 - a. Flanges: In full accordance with ASME B16.1, Class 125 including facing, drilling and thickness.
 - b. Threaded connection: In full compliance with NPT.
 - 4. Stem seal: Self-adjusting U-cups or multiple O-ring seals.
 - 5. Shut-off: Designed for setting drip-tight at the full rated pressure.

2.7 FABRICATION

- A. See Specification Section 40 05 51.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. See Specification Section 40 05 51.
- B. Install valves with valve stem horizontal, plug seat on inlet side and with plug rotating up into the open position for valves in horizontal lines.
- C. Install valve with actuator above pipe or plug centerline.

END OF SECTION