

From: [Peterson, Abram \(MPCA\)](#)
To: [CWSRFWaiver](#)
Cc: [REDACTED]
Subject: AIS Waiver Request (V-Port Ball Valves)- SRF Funding Recipient Metropolitan Environmental Services (St. Paul, MN)
Date: Monday, December 28, 2020 5:19:24 PM
Attachments: [ATT00001.txt](#)
[Waiver Request of PL 113-76 - V-Port Ball Valves.pdf](#)

Hello,

The Minnesota Pollution Control Agency (MPCA) has received a waiver request for the American Iron and Steel requirement of the Consolidated Appropriations Act of 2014, from Metropolitan Council Environmental Services (MCES) for the MWWTP Solids Renewal and Improvements project (MPCA project number 280346-PS02).

The waiver request is for **4-inch carbon steel v-port ball valves**, to be used in upgrades to a compressed air system which provides mixing in sewage sludge storage tanks.

The MPCA has reviewed the waiver request, and would like to forward the (attached) waiver request to EPA for review.

Sincerely,

Abram Peterson, P.E.

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NOTE:
This waiver submission may include references to proprietary items and brand name products. These references have been retained in order 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 CWSRFWaiver@epa.gov for more information if necessary.

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- C. Type VB3 Instrument Air Shutoff Valve: Stainless steel body ball valve, nylon handle.
 - 1. Manufacturers:
 - a. Whitey; Series 40.
 - b. Imperial Eastman; Series 200.

- D. Type VB5 Stainless Steel Ball Valve 1/2 Inch to 2 Inches: ASTM A276 GR 316 or ASTM A351 GR CF8M stainless steel body, Type 316 stainless steel balls, three-piece type, screwed ends, rated 1,000-pound WOG, with seat, body seal, and stem packing reinforced PTFE, lever operator.
 - 1. Manufacturers:
 - a. Milwaukee; BA370.
 - b. Walworth; Figure 597.
 - c. Contromatics; B Series.
 - d. Apollo
 - e. Jamesbury

- E. Type VB10 PVC Ball Valve 4 Inches and Smaller: Rated 150 psig nonshock cold WOG. with Schedule 80 ASTM D1784 Class 12454-B polyvinyl chloride true union, full port body, Teflon seat, Viton O ring stem, face and carrier seals, end entry design with true union, solvent-weld socket ends, or single union ball valve with flanged ends drilled to ANSI B16.1.
 - 1. Manufacturers:
 - a. Nibco; Chemtrol TU Series Tru-Bloc Ball Valve.
 - b. Spears Manufacturing Co. True Union 2000 Standard Series 3600 Ball Valve.
 - c. Hayward Tru Union.

- F. Type VB11 Carbon Steel V-Port Ball Valve 6 Inches and Smaller: ASTM A216, Grade WCB carbon steel body, heat treated Type 317 or A351-CF8M stainless steel V-port balls, PTFE chevron or Grafoil packing, duplex stainless shaft, flexible 317 stainless steel or RPTFE seat, 317 stainless steel wire mesh PTFE liner encapsulated bushing, flanged end connection (ASME B16.1, Class 150). Temperature rating shall be 300°F. Refer to Valve Schedule for actuator type.
 - 1. Manufacturers:
 - a. Avco 9900 Series.
 - b. FloTite
 - c. Or equal
 - 2. Cv Values for FloTite:

Valve Size	Cv Values Corresponding to Percentage of Valve Opening							
	20%	30%	40%	50%	60%	70%	80%	90%
4"	2	12	34	63	106	160	234	330



3. Cv Values for Avco:

Valve Size	Cv Values Corresponding to Percentage of Valve Opening							
	20%	30%	40%	50%	60%	70%	80%	90%
4"	2	11	29	58	102	168	268	432

4. Maximum air pressure loss across the valve shall not exceed 1 psi at 1125 scfm, with upstream pressure of 25.3 psia.
5. Valve shall be capable of burning air pressure up to 9 psi at approximately 10 scfm to 66 scfm, with upstream pressure of 25.3 psia to balance air flow between sludge storage tanks with variable water levels.

G. Type VB12 Ball Valve 2 Inches and Smaller for Pulse Jet Compressed Air:

1. Rated 800 psi non-shock cold WOG, ASTM A105, forged steel or ASTM A216-WCB, cast steel body/bonnet, in-line, three piece, bolted body, full port type, reinforced Teflon seat, ASTM A108-CS steel stem and ball, reinforced teflon stem seal and thrust washer, hand lever operator, socket weld end connection.
2. Temperature limitations: -20 to 400 °F.
3. Pressure rating: 150 psig.
4. Manufacturers:
 - a. Conbraco Industries "Apollo 83-200 Series".
 - b. Neles-Jamesbury "4DX2200TT".

H. Type VB14 Carpenter 20 Cb-3 Ball Valve 1/4 to 4 inches: Rated 600 psig, ANSI B16.34. In-line, 3-piece, bolted body, full port. Carpenter 20 Cb-3 body. Reinforced Teflon seat. Carpenter 20 Cb-3 ball and stem, with reinforced teflon thrust washer, and Teflon stem seal. Socket welded end connections. Valve temperature limitations -73 to 204°F. Lever operated.

1. Manufacturers:
 - a. Conbraco Industries
 - b. Worcester Controls
 - c. Neles Jamesbury

I. Type VB15 8 inch and 10 inch Ball Valves for dewatered biosolids (cake) service. Full port, trunnion mounted, ANSI Class 600, and designed for a maximum working pressure of 1,440 psi and working (internal) temperature of 500°F. API monogrammed, built and audited to API 6D and ANSI standards. Valves shall consist of a full port ball that rotates on a fixed axis with an upper stem and lower trunnion. The valve shall be a bi-directional flow valve with independent sealing capability on each side of the ball. The valve shall also be non-lubricated, designed for dirty service (high solids applications or well drilling).