

Waiver Request of P.L. 113-76 (American Iron and Steel Requirement) of the
Consolidated Appropriations Act of 2014

MWWTP Solids Renewal & Improvements, Project No. 805947
Metropolitan Council Environmental Services (MCES), St. Paul, Minnesota
February 9, 2021

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.

GENERAL

The MWWTP Solids Renewal & Improvements project at the Metropolitan Wastewater Treatment Plant is funded by a loan through the Clean Water State Revolving Loan Fund. The Consolidated Appropriations Act of 2014 includes an "American Iron and Steel" (AIS) provision that requires SRF recipients to use iron and steel products produced domestically. Valves are included in the list being subject to this requirement.

The MWWTP Solids Renewal & Improvements project includes renewal and improvements of three sewage sludge incinerators and associated energy recovery and air pollution control equipment including miscellaneous equipment related to processing wastewater solids. Part of the project includes upgrades to the steam and condensate system in order to provide a second steam condenser which is needed for the additional capacity required by the other plant upgrades. To accomplish this, several different types of steam valves were specified. These valves have been grouped together because they all deal with the modulation and shutoff of steam and have similar pressure and temperature requirements.

The design team and contractor have not been successful at finding domestic manufacturers of gate valves, globe valves, and check valve specified for this project, and therefore request a waiver be issued for the valves identified below for this project. In accordance with the guidelines for AIS waiver request, specific information is required to be submitted with waiver requests. The required information is present below and in attached documents.

Description of the foreign and domestic construction materials

Valve Type: VG8 Gate Valve
Quantity: Two (2) 10-inch carbon steel gate valves / Three (3) 6-inch carbon steel gate valves
Price: The material price is [REDACTED] for the 10-inch valves and [REDACTED] for the 6-inch valves. The total material price for all five (5) valves is [REDACTED]

Source Location: China

Valve Type: VG9 Gate Valve
Quantity: Six (6) 1-inch carbon steel gate valves / Eight (8) 3/4-inch carbon steel gate valves
Price: The material price is [REDACTED] for the 1-inch valves and [REDACTED] for the 3/4-inch valves. The total material price for all fourteen (14) valves is [REDACTED]

Source Location: Europe

Valve Type: VL6 Globe Valve
Quantity: Two (2) 10-inch carbon steel globe valves / One (1) 6-inch carbon steel globe valves

Price: The material price is [REDACTED] for the 10-inch valves and [REDACTED] for the 6-inch valve. The total material price for all three (3) valves is [REDACTED]

Source Location: China

Valve Type: VC21 Check Valve

Quantity: One (1) 6-inch carbon steel check valve

Price: The material price is [REDACTED] for the 6-inch check valve.

Source Location: China

Time of Delivery: The estimated delivery time for these valves is approximately 8 weeks after issuance of a purchase order to the valve manufacturer.

Location of Project: Metropolitan Wastewater Treatment Plant
2400 Childs Rd
St Paul, MN 55106

Name and Address of Supplier: Columbia Pipe and Supply Co
920 Apollo Rd UNIT 100
Eagan, MN 55121
Contact Phone Number: (651) 454-3880

Detailed Justification for the use of Foreign Construction Materials

The MWWTP Solids Renewal & Improvements includes upgrades to the steam and condensate system in order to provide a second steam condenser which is needed for the additional capacity required by the other plant upgrades. To accomplish this, several different types of steam valves were specified. These valves have been grouped together because they all deal with the modulation and shutoff of steam and have similar pressure and temperature requirements. These valves can be subject to working pressures in excess of 150 pounds per square inch (psi) and must allow for operation of steam and condensate. The design team and contractor have not been successful at finding domestic manufacturers of gate valves, globe valves, and check valve specified for this project, and therefore request a waiver be issued for the valves identified above for this project.

Supporting Documentation Necessary to Demonstrate the Availability, Quantity, and/or Quality of the Materials for Which the Waiver is Requested

Supplier Information or Pricing Information From a Reasonable Number of Domestic Suppliers Indicating Availability / Delivery Date for Construction Materials:

The project team has contacted and / or received information for the following manufacturers which can provide the specified steam valves but are unable to meet the AIS requirements:

VG8 Gate Valve	VG9 Gate Valve	VL6 Globe Valve	VC21 Check Valve
Stockham	Crane	Stockham	Stockham
Crane	Velan	Crane	Crane
Newco	Bonney Forge	Newco	Newco
Milwaukee Valve	Vogt	Milwaukee Valve	Milwaukee Valve
Warren Valve	Powell	Warren Valve	Warren Valve
Velan		Velan	Velan
Powell		Powell	Powell

Documentation of the Assistance Recipient's Efforts to Find Available Domestic Sources, Such as a Description of the Process for Identifying Suppliers and a List of Contacted Suppliers:

A listing of the suppliers contacted and reviewed to provide the required valves for this project is provided above. This list was generated based on the design team's experience designing and implementing numerous projects of similar scope and contact with local vendors with experience providing these types of valves.

Project Schedule:

- Bid Opening: January 30, 2020
- Notice to Proceed for Construction: May 6, 2020
- Anticipated Installation of Valves: July 14, 2021
- Project Completion: July 5, 2022

Relevant Excerpts from the Project Plans, Specifications, and Permits Indicating the Required Quantity and Quality of Construction Materials:

The following project drawing sheets are included for reference. These sheets indicate the extent of the auxiliary condenser modifications and steam valves, including call-outs to individual valves:

- Sheet SMB DP106 – Solids Management Building Auxiliary Condenser Plan
- Sheet SMB DP107 – Solids Management Building Overall Steam Piping Plan
- Sheet SMB DP406 – Solids Management Building Auxiliary Condenser Section
- Sheet SMB IA501 – Solids Management Building Excess Steam Condenser CNDAUX2
- Sheet SMB IA502 – Solids Management Building Excess Steam Condenser CNDAUX1

Project Specification Section 15100 – Valves and Operators is included for reference. This specification covers valve requirements for the project, including requirements for the steam valves. Refer specifically to pages:

- 15100-5 (Paragraph 2.5.A, Type VG8 Gate Valve 2 Inches and Larger)
- 15100-5 (Paragraph 2.5.B, Type VG9 Gate Valve 1/2 inch to 2 inch)
- 15100-6 (Paragraph 2.7.A, Type VL6 Globe Valve 2 Inches and Larger)
- 15100-11 (Paragraph 2.11.B, Type VC21 Check Valve 2 Inches Through 24 Inches)
- 15100-29 thru 15100-32 (Valve Schedule).

Waiver Request including a Statement from the Prime Contractor and/or Supplier Confirming the Non-Availability of the Domestic Construction Materials for Which the Waiver is Sought.

Shank has researched the availability of domestically manufactured gate valves, globe valves, and check valve specified for this project and could not find any manufactured domestically that would meet the project specifications. Their supplier Columbia Pipe and Supply Co was also unable to find a manufacturer of the specified valves that could meet AIS requirements.



1. In accordance with AWWA C550.
2. Either two-part liquid material or heat-activated (fusion) material except only heat-activated material if specified as "fusion" or "fusion bonded" epoxy.
3. Minimum 7-mil dry film thickness except where limited by valve operating tolerances.

B. Epoxy coat buried cast iron body valves consistent with Article 2.4.A.1 through 3

2.5 GATE VALVES

A. Type VG8 Gate Valve 2 Inches and Larger: Cast carbon steel body, carbon steel mounted, ASME Class 300 flanged ends, flexible wedge gate, outside rising stainless steel stem, rated 300-pound SWP, 640-pound WOG.

1. Manufacturers:
 - a. Stockham; Figure 30-OF-U.
 - b. Crane; Figure 33.

B. Type VG9 Gate Valve 1/2 inch to 2 inch: Forged carbon steel body, carbon steel mounted, ASME Class 800 socket welded, carbon steel wedge gate with 13% chrome overlay, outside rising stainless steel stem.

1. Manufacturers:
 - a. Crane; Figure FB3604XUW
 - b. Velan; 2054B

2.6 KNIFE GATE VALVES

A. Type VK1 Knife Gate Valve 24 Inches and Smaller: Cake Piping

2. Bonnetless wafer body type, outside stem and yoke, rated for 150 psi cold water, ANSI B16.1 lugged ends, self-cleaning, nonclogging, with round port, resilient neoprene seat, drip-tight shutoff.
3. Wetted metal parts and stem, Type 316 stainless steel, yoke sleeve bronze, gate finish ground both sides with a sharp knife edge.
4. Packing system leak-tight seal around the gate, valve superstructure and yoke designed for full peripheral access to gland bolts when valve is equipped with manual or power actuator.
5. In compliance with MSS SP-81.
6. Manufacturers:
 - c. Fabri-Valve; Figure 37L.
 - d. DeZurik; Series KGL.
 - e. Rovang; Model L17.

B. Type VK3 Knife Gate Valve 2 inches to 48 inches: Dry Material Handling



1. Bonnetless wafer body type, outside stem and yoke, rated for 150 psi cold water, ANSI B16.1 lugged ends, self-cleaning, nonclogging, with round port, 304 stainless steel metal seat.
2. Type 304 cast stainless steel body, 304 stainless steel wetted parts, yoke sleeve bronze, gate finish ground both sides with a sharp knife edge. Blade shall be totally enclosed in OPEN or CLOSED positions to prevent dust emissions.
3. Packing system leak-tight seal around the gate. PTFE packing material. Valve superstructure and yoke designed for full peripheral access to gland bolts when valve is equipped with manual or power actuator. Packing shall be rated to 350°F.
4. In compliance with MSS-SP 81.
5. Media includes incinerator ash and Lime. Components, including seats and gaskets shall be compatible with the specified media.
6. Manual chainwheel actuator
7. Manufacturers:
 - a. DeZurik Series KGC-ES or Equal.

2.7 GLOBE VALVES

- A. Type VL6 Globe Valve 2 Inches and Larger: Cast carbon steel body, carbon steel mounted, flanged ends, carbon steel seat, outside screw and yoke, bolted bonnet, rated 300-pound SWP, 640-pound WOG.
 1. Manufacturers:
 - a. Stockham; Figure 30-GPF-U.
 - b. Crane; Figure 151.

2.8 BALL VALVES

- A. Type VB1 Ball Valve 2 Inches and Smaller for General Water and Air Service: All-bronze, end entry type, RTFE seats, Teflon packing, hand lever operator, rated 150-pound SWP, 600-pound WOG.
 1. Manufacturers:
 - a. Milwaukee; BA100, threaded end.
 - b. Nibco; T-585-70, threaded end.
 - c. Milwaukee; BA150, soldered ends.
 - d. Nibco; S-585-70, soldered ends.
 - 5) Apollo
 - 6) Jamesbury
- B. Type VB2 Ball Valve 2 Inches and Smaller for Equipment Air System Shutoff: All-bronze, end entry, RTFE seat, Teflon packing, rated 600-pound WOG, threaded ends, safety exhaust port to exhaust the downstream side when valve is in closed position, locking handle.
 1. Manufacturers:
 - a. Milwaukee; BA100ELD.
 - b. Apollo; 75-100-41.



- b. Keystone
- C. Type VF11 Butterfly Valve for Sludge Mixing Air and Final Effluent (Isolation):
 - 1. ASTM A126, Class B, cast iron body with lugged end connections. PTFE lined EPDM or FKM seat with ASTM B148, Alloy 952, aluminum bronze or Nylon 11-coated ductile iron disc. ASTM A279, Grade 316 or 304 stainless steel valve stem with synthetic O-ring stem seals and Buna-N stem packing.
 - 2. Temperature range - 20 to 300 °F. Pressure rated to 150 psi shutoff.
 - 3. Valve Actuator – See Valve Schedule
 - 4. Manufacturers:
 - a. Keystone “AR2”
 - b. ABZ
 - c. Bray Series 31
- D. Type VF12 Lug Butterfly Valve 2 Inches to 12 Inches for Low Pressure Process Air Service: Cast iron or ductile iron body, Type 316 stainless steel disc, Type 18-8 stainless steel one-piece stem, self-lubricating sleeve type bearing, Viton replaceable resilient seat, self-adjusting packing, suitable for temperatures up to 250 degrees F, bubble-tight at 50 psi differential pressure, valve body to fit between ANSI B16.1 flanges.
 - 3. Manufacturers:
 - a. Keystone; Model AR2.
 - b. Bray

2.11 CHECK AND FLAP VALVE

- A. Type VC5 Double Disc Swing Check Valve:
 - 1. Wafer style, spring loaded, cast iron or carbon steel body, aluminum-bronze or ductile iron doors, resilient seats, stainless steel hinge pin, stop pin spring.
 - 2. Valve 2 inches through 12 inches rated 200-pound cold water and valve 14 inches through 54 inches rated 150-pound cold water.
 - 3. Manufacturers:
 - a. Stockham; 970.
 - b. APCO; Series 9000.
- B.. Type VC21 Check Valve 2 Inches Through 24 Inches: Flanged end, cast carbon steel body, carbon steel mounted swing type, carbon steel hinges, stainless steel hinge shaft (keyed to disc), rated 125-pound SWG, 200-pound WOG.
 - 1. Manufacturers:
 - a. Stockham Figure 15-SF-U.
 - b. Crane Co.; Cat. No. 147.
- C. Type VC22 Disc Check Valve: For air service, pressure rated to 100 psig, valve opening pressure adjustable 0 – 0.7psig, sized for a passable air flow rate of 8,000 SCFM. Valve shall be provided with a carbon steel body and flanged ends.
 - 1. Manufacturers:

CONFORMED DOCUMENTS

Metropolitan Council
Environmental Services

MWWTP Solids Renewal & Improvements
12/18/2019

Tag No.	Size (inches)	Valve Type	Fluid	Service	Maximum P (psig)	Actuator Type	Control Features	Notes
V1217B	4	VB11	AAG	M	15	IE	A, C, D, FL, M	Weatherproof housing; Sludge Storage Tank 7, Header B.
V1218A	4	VB11	AAG	M	15	IE	A, C, D, FL, M	Weatherproof housing; Sludge Storage Tank 8, Header A.
V1218B	4	VB11	AAG	M	15	IE	A, C, D, FL, M	Weatherproof housing; Sludge Storage Tank 8, Header B.
CV1211A	See Notes	See Notes	AAG	--	15	CK	--	Air Padding Blower Discharge Check Valve. Valve size to match blower discharge connection size. Valve to be provided by blower packager per Section 11625
V1211B	6	VF11	AAG	O/C	15	LVR	--	Air Padding Blower Discharge Isolation
VCNDAUXI	1	VG9	STR	O/C	150	HW	--	--
VCNDAUXJ	1	--	WFE	O/C	100	--	--	See specification 15520
VCNDAUXK	1	VG9	STS	O/C	150	HW	--	--
VCNDAUXL	1	VG9	STR	O/C	150	HW	--	--

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Tag No.	Size (inches)	Valve Type	Fluid	Service	Maximum P (psig)	Actuator Type	Control Features	Notes
VCNDAUXP	3/4	VG9	STS	O/C	150	HW	--	--
VCNDAUXQ	8	--	WFE	M	100	PD	--	See specification 15520 for valve type.
VCNDAUXR	10	VF11	WFE	O/C	150	CHWL	--	--
VCNDAUXS	10	VF11	WFE	O/C	150	CHWL	--	Valve body shall be ASTM A217 Gr 217, or equivalent material.
VCNDAUXT	10	VL6	WFE	O/C	150	CHWL	--	Valve trim shall be Stellite cavitation resistant.
VCNDAUXX	3/4	VG9	WFE	O/C	100	HW	--	--
VSTS150J	10	VG8	STS	O/C	150	HW	--	--
VSTS150JA	3/4"	VG9	STS	O/C	150	HW	--	--
VSTS150JB	3/4"	VG9	STS	O/C	150	HW	--	--
VCNDAUX2A	8	--	STS	M	150	PD	--	See specification 15520 for valve type.
VCNDAUX2B	1	--	STS	O/C	150	PD	--	See specification 15520 for valve type.
VCNDAUX2C	6	--	STR	M	150	PD	--	See specification 15520 for valve type.
VCNDAUX2D	6	VG8	STR	O/C	150	HW	--	--

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Tag No.	Size (inches)	Valve Type	Fluid	Service	Maximum P (psig)	Actuator Type	Control Features	Notes
VCNDAUX2E	6	VG8	STR	O/C	150	HW	--	Valve body shall be ASTM A217 Gr 217, or equivalent material.
VCNDAUX2F	6	VL6	STR	O/C	225	CHWL	--	--
VCNDAUX2G	10	VF11	WFE	O/C	150	HW	--	--
VCNDAUX2H	10	VF11	WFE	O/C	150	CHWL	--	--
VCNDAUX2I	1	VG9	STR	O/C	150	HW	--	--
VCNDAUX2J	1	--	WFE	O/C	100	--	--	See specification 15520
VCNDAUX2K	1	VG9	STS	O/C	150	HW	--	--
VCNDAUX2L	1	VG9	STR	O/C	150	HW	--	--
VCNDAUX2M	¾	VG9	WFE	O/C	100	HW	--	--
VCNDAUX2O	10	VG8	STS	O/C	150	CHWL	--	--
VCNDAUX2P	¾	VG9	STS	O/C	150	HW	--	--
VCNDAUX2Q	8	--	WFE	M	100	PD	--	See specification 15520.
VCNDAUX2R	10	VF11	WFE	O/C	150	CHWL	--	--
VCNDAUX2S	10	VF11	WFE	O/C	150	CHWL	--	Valve body shall be ASTM A217 Gr 217, or equivalent material.

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Tag No.	Size (inches)	Valve Type	Fluid	Service	Maximum P (psig)	Actuator Type	Control Features	Notes
VCNDAUX2T	10	VL6	WFE	O/C	150	CHWL	—	Valve trim shall be Stellite cavitation resistant.
VCNDAUX2U	6	VC21	STR	--	150	CK	--	--
VCNDAUX2W	¾	VG9	STR	O/C	150	HW	--	--
VCNDAUX2X	¾	VG9	WFE	O/C	100	HW	--	--
VCNDAUX2Y	6	VG8	STR	O/C	150	CHWL	--	--
VCNDAUX2Z	10	VF11	WFE	O/C	100	CHWL	--	--
VWSCR1AA	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR2AA	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR3AA	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR1AB	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR2AB	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR3AB	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR1AC	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR2AC	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR3AC	6	VF10	WFE	O/C	100	LVR	--	--
VWSCR1AD	6	VF10	WFE	O/C	100	LVR	--	--