Environmental Utilities Department
2005 Hilltop Circle
Roseville, California 95747

May 4, 2021

Ms. Stephanie White
Davis-Bacon Compliance
AIS Liaison
Loan and Grant Administration Section
Division of Financial Assistance
State Water Resources Control Board
1001 "I" Street, 16th Floor, Sacramento, CA 95814

Subject: City of Roseville Availability Waiver for CNG Service Stainless Steel Ball Valves (SRF Agreement No. D19-01012, Project No. C-06-8215-210, Pleasant Grove Wastewater Treatment Expansion and Energy Recovery Project)

Dear Ms. White:

This letter serves as a request on behalf of the City of Roseville (City) to obtain an American Iron and Steel (AIS) Availability Waiver for the specified stainless steel ball valves for compressed natural gas (CNG) service required to complete the Pleasant Grove Wastewater Treatment Expansion and Energy Recovery Project (Project No. C-06-8215-210). This request is made on the basis that the specified component is not produced in sufficient quantities and in reasonably available quantities in the United States, and that no domestically manufactured alternatives can be used to meet the project requirements.

The goal of the Expansion and Energy Recovery Project is to provide an economically and environmentally beneficial means of utilizing digester gas produced by the new anaerobic digesters that are being constructed under a separate project at the Pleasant Grove Wastewater Treatment Plant. Digester gas will be treated and converted into renewable natural gas by facilities constructed under the Expansion and Energy Recovery Project. That renewable natural gas will then be compressed and used to fuel the City's CNG solid waste truck fleet.

The project has an anticipated completion date of May 2022. Timely procurement and installation of the subject ball valves are critical to the project schedule. These ball valves are required at locations where high-pressure tubing connects to CNG fueling equipment (e.g., the CNG Compressors) and must be installed before the CNG Fueling Facility can be operated. These valves allow operators to open flow or shut off flow to equipment and are essential for maintenance and operator safety. The CNG Fueling Facility is contracted as an early construction milestone to be completed by July 2021. The City has purchased CNG-fueled solid waste trucks, and some of those trucks have already been delivered. The CNG Fueling Facility must be finished to allow those vehicles to fuel.

The ball valves must satisfy the conditions presented in project specification 43 10 01 and the project drawings (see Exhibit A). However, the CNG Fueling System subcontractor (EFS West) could not identify any manufacturers capable of supplying AIS-compliant ball valves that met the project specifications.

Substitute ball valves that meet AIS requirements do not meet project requirements, given the high operating pressure, potentially corrosive environment, and material compatibility needs. As noted, the stainless steel ball valves covered in this waiver request are required at locations where high-pressure stainless steel tubing connects to CNG fueling equipment, and these process locations have working pressures up to 5,000 psi. Additionally, stainless steel is much more resistant to corrosion than carbon steel, and corrosion resistance is essential for longevity of the valves. Stainless steel valves can also be connected to the specified stainless steel tubing without additional dielectric fittings. For these reasons, stainless steel ball valves that meet the project specifications are necessary to complete the project and produce renewable energy.

Exhibit B includes product data for the proposed stainless steel ball valves and shows that the valves meet the 5,000 psi pressure requirement and are constructed of stainless steel.

General Waiver Requirements

1. Description of the Material: Three-piece stainless steel ball valves with the following characteristics.

    a. CNG service
    b. 316 stainless steel valve body
    c. 1-inch outside diameter (OD) connections
    d. 6,000 psi maximum allowable working pressure

2. Unit of Measure, Quantity, and Price:

	1-inch OD stainless steel ball valves
Unit of Measure	One valve
Quantity	10
Total Cost	

3. Time of Delivery or Availability:

    a. The valves requested in this waiver have already been procured and have been delivered to the project site.

4. Location of Construction Project:

    a. The project is located at Pleasant Grove Wastewater Treatment Plant, 5051 W Park Dr, Roseville, CA 95747.

5. Name and Address of Proposed Supplier:

    a. Controlled Motion Solutions
    West Coast Fluid Power Div.
    5370 S. Watt Avenue Suite 300
    Sacramento, CA 95826
    800.532.8837 tel
    800.370.0447 fax

6. Justification for Use of Foreign Construction Materials

    a. AIS-compliant stainless steel ball valves that meet the requirements listed in Item 1 are not reasonably available in the United States. Specifically, the CNG Fueling System subcontractor (EFS West) is not aware of any facilities in the United States that manufacture stainless steel ball valves at the required size and pressure.

7. Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor:

    a. CWSRF and AIS compliance requirements and documentation were included in the bid documents when the City requested proposals from prospective prime contractors. Furthermore, the executed agreement demonstrates that the General Contractor acknowledged the AIS compliance requirements.
    b. Under contract with WM Lyles (prime contractor), EFS West (CNG Fueling System subcontractor) contacted six suppliers, including Apollo Valves Conbraco, COMOSO Controlled Motion Solutions, M&M Control Service Inc., PAC Stainless, Fluid Gauge Company, and Swagelok regarding the 1-inch OD stainless steel ball valves with compression ends. As shown in Exhibit C, none of these suppliers were able to provide the AIS-compliant 1-inch OD stainless steel ball valves.

Availability Waiver Requirements

1. Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials:

    a. From the suppliers listed in Section 7 above, COMOSO sources 1-inch OD stainless steel ball valves that meet the project qualifications from one (1) manufacturer, Superlok. The quotation from COMOSO, which includes pricing and availability information, is provided in Exhibit B.

2. Project Schedule:

    a. The project is currently scheduled to be completed in May 2022. However, the project includes seven Substantial Completion Milestones, and completion of the CNG Fueling Facility is Substantial Completion Milestone #5, scheduled for June 2021. A delay to stainless steel ball valve delivery will result in a delayed completion of the CNG Fueling Facility, which will impact when the City's new Solid Waste CNG vehicles can begin using CNG fuel. The City has already purchased CNG-fueled solid waste trucks and requires the project's CNG fueling system to be operating by the end of June 2021.

3. Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials:

    a. Contract requirements including the applicable specification language and project plans for the required stainless steel ball valve are provided in Exhibit A.

4. 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. The General Contractor's CNG Fueling System subcontractor (EFS West) contacted Apollo Valves Conbraco, COMOSO Controlled Motion Solutions, M&M Control Service Inc., PAC Stainless, Fluid Gauge Company, and Swagelok via telephone. Exhibit C includes email conversations between the subcontractor and the General Contractor documenting these phone calls and stating that all efforts to find an AIS-compliant ball valve that met the project's requirements had been exhausted.

5. Contractor and/or supplier to provide a statement confirming the nonavailability of the domestic construction material which is sought:

    a. A statement from the CNG Fueling System subcontractor to the General Contractor is provided in Exhibit D.

6. Has the State received other waiver requests for the materials described in this waiver request, for comparable projects?

    a. A prior waiver request has not been submitted or approved because the material is a unique specialty item for an uncommon municipal wastewater process.

Sincerely,

Richard Plecker
Director of Environmental Utilities

cc: Tracie Mueller, City of Roseville, Project Manager
Ken Glotzbach, City of Roseville, Assistant Director of EU
Joshua Fegurgur, State Water Resources Control Board
Adam Ross, Brown and Caldwell
William Pevec, Brown and Caldwell

Attachments:

Exhibit A – Stainless Steel Ball Valve Contract Requirements
Exhibit B – Ball Valve Product Data and Quote
Exhibit C – Confirmation of Nonavailability
Exhibit D – Letter from EFS West (Subcontractor)

EPA removed shop drawings, pricing quotations, and catalog information included in the original submission due to non–comformance with web accessibility requirements and/or potential for proprietary business information. EPA has deemed that the drawings and other information omitted are not germane to evaluation of the waiver request. However, if you wish to see the omitted information, send your request to CWSRF_Waiver@epa.gov referencing this waiver submission.

Exhibit A

Stainless Steel Ball Valve Contract Requirements

B. PRESSURE RATINGS

1. All piping, tubing, unions, vessels, valves, filter bodies and appurtenances shall have a manufacturer's rated normal working pressure that is equal to or above its respective normal duty pressure, with a burst-safety factor as specified by either ASME B31.3, or the ASME Boiler and Pressure Vessel Code, as appropriate. Such ratings shall be indicated on component and material submittals to be approved by City. In the event that City requests revising to a safety factor to match similar existing facilities, this shall not constitute a change order.

C. ELECTRICAL CLASSIFICATIONS

1. All electrical and electronic components shall be installed and configured appropriately for their respective service conditions and locations. All such installations shall comply with NFPA 70 standards for Class I, Group D, Divisions 1 and 2, and as listed in Table 7.4.2.9 of NFPA 52, 2013, or other requirements as called for by AHJs.

D. MATERIAL COMPATIBILITY

1. Contractor shall be responsible for providing and installing components and materials throughout the entire Facility that are compatible with, and do not adversely react to other component or material that could be expected to come in contact during normal operation. Prior to selecting materials, Contractor shall submit a complete materials list for City review and comment. Any changes to a material requested by the City shall be incorporated at no additional cost to the City.

E. BALL VALVES

1. All ball valves larger than 1" shall use 3-piece construction, shall include bodies, balls and stems fabricated from 304 or 316 stainless steel, and shall have a listed maximum allowable working pressure (MAWP) of not less than the highest service pressure normally existing in the process segment where it will be located. Automatic ball valves shall use pneumatic operators powered by a common control-air system. Actuators driven by regulated CNG are not allowed.

2.02 CNG COMPRESSOR SKIDS

A. GENERAL

1. Provide two identical CNG-compressor skids, each with one CNG compressor installed in a pre-assembled skid. Each skid shall include a 150 HP prime mover rated for inverter duty, be intended for use with natural gas and be able to operate in two-stage mode and in four-stage mode, as defined under articles 2.02-2.04.
2. ESD BUTTONS. If a walk in-type enclosure is provided, one ESD button shall be located inside the skid enclosure near the primary access door. A button shall be located on the outside of the skid enclosure.
3. OIL 'DAY' TANK. Each compressor shall include a 10-gallon oil supply tank piped to supply makeup compressor oil to the compressor sump. Tank system shall include a low-level switch or transmitter, which shall annunciate at its respective compressor control panel, and a sight glass.
4. ENCLOSURE. Each skid shall be enclosed in a weather-resistant rain-tight lockable enclosure. Doors and panels shall be removable to facilitate servicing. If a walk in-

type enclosure is provided, design shall accommodate walking room around compressors and drives within enclosure.

5. ENCLOSURE ACCESSORIES
   a. Doors. Doors may be of either swing out, sliding, and/or rollup type, shall be lockable and shall include a means to open at least one door from the inside, even if locked from the outside.
   b. Interior Lighting. Furnish one 4' long fixture with (2) fluorescent lamps or two 18" LED type fixtures in each compressor enclosure, and located so as to provide uniform illumination throughout the interior area. Alternately provide 2 compact-fluorescent fixtures with uniform distribution of light throw. Install a manual wall switch inside each enclosure for skid lighting control. Fixtures, switch and conduit shall be listed for Class-1, Division-2 Group-D service.
   c. Methane Detection. Ceiling-mounted point-infrared methane detection shall be provided and shall interface with the skid controller. Detection of 10% LEL methane shall annunciate an alarm at the control panel. Detection of 20% LEL methane shall annunciate an alarm at the control panel and shut down the compressor system equal to activation of the ESD. Methane detectors shall be Drager Polytron, Sierra Monitor, Sensor Electronic Corporation, or General Monitors.
   d. Sound Attenuation. Enclosure shall provide sound-attenuation features, including double-wall construction (if required to meet noise requirements) and sound-attenuated louvers for cooler-air intake and exhaust.
6. VIBRATION SPEED. The compressor skid frame shall have a maximum vibration speed of 0.1" per second.
7. INSTRUMENT AIR. Actuated valves shall be powered by compressed instrument air that shall be piped to each skid. Provide 1/2" tubing connection for 80-100 PSI instrument-air supply from off skid. Provide pressure gauge scaled to 200 PSI that is common to the CA connection.
8. ACCEPTABLE PACKAGER/MANUFACTURERS
   a. ANGI Energy Systems
      305 W. Delevan Dr.
      Janesville, WI 53546
      Telephone: (800) 955-4626
   b. J.W. Operating Company
      122 Dovel Rd.
      Longview TX 75603
      (903) 643-3413
   c. Or approved equal.

B. PERFORMANCE BY MODE
   1. TWO-STAGE PERFORMANCE. Compressor shall generate 500-3000 SCFM from a suction-pressure range of 875-3800 PSIG respectively, using two stages of compression. Compressor shall be capable of operating at skid-suction pressures as low as 700 PSIG and as high as 4200 PSIG using two stages of compression.
   2. FOUR-STAGE PERFORMANCE. Compressors shall each have a minimum discharge capacity of 390 SCFM at 4500 PSIG, based on a suction-supply pressure of 65 PSIG at skid inlet in four-stage mode. Compressor shall be capable of operating at skid-

B. Specifications

1. Dispensers shall be capable of delivering fills of 3600 PSIG temperature compensated to 70°F, based on control logic housed in the dispenser~~, except one hose shall provide 3000 PSIG fills~~. [4.9] Dispensers shall include one MicroMotion CNG-050 meter, and mechanical vehicle pressure gauge for each hose at exterior of cabinet and shall have a backlit data display. All CNG tubing and fittings shall be minimum 3/4" x .095", grade 316 SS. Vent tubing shall be 3/8" x .049", grade 316 SS. A means of preventing the escape of CNG from the fast-fill system in case the dispenser is knocked off of its base shall be provided, such as a vibration switch connected to the ESD circuit. Dispenser-control valves shall be ball or solenoid valves with flow performance equal to ¾" tubing. Dispensers shall be provided with excess flow switches, pressure gauges that read 1.2 times the system pressure, and ¼ turn manual shut-off valves.

C. Filters

1. Oil Coalescing. Dispensers shall include one inline oil-coalescing filter for each of the two sequence-bank feed lines and a block and bleed valve arrangement to facilitate servicing of filters. Two total filters shall be housed in Parker-Hannifin J4 housings and shall include a grade-4 coalescer element. Filters shall be located upstream of the meter and control valves and may be located in the dispenser pit beneath or next to the dispenser, and/or in the dispenser cabinet.
2. Startup Cleaning and Filtration. Contractor shall be responsible for ensuring that all pipes and vessels upstream of the dispensers are free of dirt, welding slag, moisture and debris prior to startup. Contractor shall submit a pipe-cleaning method for approval by the City prior to startup. Contractor shall also comply with temporary filtration requirements per article 3.05.C.2.e.

D. Hose and Nozzle

1. Hoses shall be 3/4" x 12 ft. long with 5000 PSIG MAWP, shall have inline breakaway mechanisms with check valves, and be electrically conductive. Nozzle shall be OPW CT5000 or equal WEH. Retractor shall keep hose from contacting ground when nozzle is in its keeper. The nozzle keeper shall be installed on a side of the dispenser cabinet that does not face toward the fueling lane and so that the nozzle cylinder is parallel with the fueling lane when it is in its keeper.

E. Operation and Process Connections

1. Dispenser shall be controlled by internal logic controller and shall include internal two-bank sequencing with 1" tubing connections to the priority-valve panel. Sequencing shall be pneumatically actuated ball valves in the dispenser. Connect ½" 80-100 PSI instrument-air tubing to each dispenser and provide ½" ball valve and pressure gauge scaled to 200 PSIG at each air connection. Provide SS tubing-vent outlet that is 10' AFF at each dispenser, including tubing tee with 6" cross to prevent entry of precipitation.

F. Interface with Fuel-Management Terminal

1. Dispensers shall be configured for connection to a fuel-management terminal on its island, so that terminal must authorize the dispensing of fuel, and so that CNG fuel

Exhibit B

Ball Valve Product Data and Quote

Exhibit C

Confirmation of Nonavailability

William Pevec

From: John Lunsford <jlunsford@wmlylesco.com>
Sent: Thursday, April 08, 2021 9:03 AM
To: William Pevec
Cc: Tim Hansen; Mueller, Tracie; Von Regli
Subject: FW: Variance Request
Attachments: rptSORQuotePrint.pdf; SBVH360 NEW.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Willy,

Please let me know if you need any additional information from us to submit the EPA waiver for these high pressure SST ball valves.

John C. Lunsford | Senior Project Manager
W. M. LYLES CO. | Northern Division
3925 Progress Drive | Rocklin, CA 95765
O 916-375-1833 | C 925-260-3500
www.wmlyles.com

From: Von Regli <von.regli@efswest.com>
Sent: Thursday, April 8, 2021 7:56 AM
To: John Lunsford <jlunsford@wmlylesco.com>
Subject: Variance Request

The following vendors have stated that they do not supply 1" stainless steel ball valves rated at 5000psi or greater with compression ends;

Niki Fredrickson, PAC Stainless 206-824-7780
Patricia Veronica , Swagelok 800-252-7087
Alex Richoz, M&M Control service inc 800-876-0036
Apollo Valves Conbraco, 800-876-0036
Caroline Bozin, Fluid Gauge, 415-285-0648
Robert Young COMOSO Controlled Motion Solutions, 800-532-8837

We request a variance for the "Superlok" SBVH 360 series made in Busan South Korea
They are readily available the cost is in line with all of the other 1" valves $235.39 see quote.

Von Regli
EFS West Sr Project Manager
28472 Constellation Rd

Santa Clarita CA. 91355
661 705-8264 desk
818 235-6283 cell

Exhibit D

Letter from EFS West (Subcontractor)

PLANNING • DESIGN • CONSTRUCTION
28472 Constellation Rd, Valencia, CA 91355

April 8, 2021

To who it may concern

EFS West has researched the availability of a 1" stainless steel ball valve compression ends rated for 5000 psi with or greater that meets the American Iron and Steel act. All of the manufactures we spoke with were not able to meet the AIS requirements, most of the internal parts such as the stem and or ball were imported from other countries.

EFS WEST
Von Regli
Von Regli
SR. Division Manager

661-705-8200 • fax 661-775-9623