



October 3, 2019

Martin Taylor  
 Davis-Bacon Compliance  
 AIS Liaison  
 Loan & Grant Administration Section  
 Division of Financial Assistance  
 State Water Resources Control Board  
 1001 "I" Street, 16th Floor, Sacramento, CA 95814

RE: San Francisco Public Utilities Commission  
 Availability Waiver SRF Project No. 8286-110 (SFPUC Project No. WW-628-02A) San Francisco Southeast Water Pollution Control Plant (SEP)

Dear Mr. Martin Taylor,

This letter serves as a request on behalf of the San Francisco Public Utilities Commission (SFPUC) to obtain an American Iron and Steel (AIS) Availability Waiver for the specified 316 Stainless Steel Seamless tubing required to complete the SFPUC SEP New Headworks Project (WW-628-02A). 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. The tubing must satisfy the conditions presented in specification 40 05 23, however, the metal needed for the tubing is not melted in the United States therefore would not be in compliance with the AIS requirement. The project is a part of an investment to repair and rehabilitate aging treatment facilities, with an anticipated completion date of September 2024. The New Headworks Project includes the retrofit of Bruce Flynn Wastewater Pump Station. The retrofit at the Bruce Flynn Pump Station includes installation of new stainless steel tubing and hydraulic power unit (HPU) to control wastewater influent gates for the main sewage lift pumps. The Bruce Flynn Pump Station is critical to the SFPUC wastewater operations in meeting treatment permit requirements.

**General**

1. Description: The purpose of the stainless steel tubing is to supply hydraulic fluid for the new HPU to control wastewater influent gates.

**London N. Breed**  
 Mayor

**Ann Moller Caen**  
 President

**Francesca Vietor**  
 Vice President

**Anson Moran**  
 Commissioner

**Sophie Maxwell**  
 Commissioner

**Tim Paulson**  
 Commissioner

**Harlan L. Kelly, Jr.**  
 General Manager





[REDACTED]

d. [REDACTED]

e. [REDACTED]

f. [REDACTED]

7. Supporting documentation including that the Contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers.
  - a. Included as Exhibit A the supplier has contacted five (5) 316 Stainless Steel tubing manufacturers requesting the availability and compliance of the type and quantity of steel tubing required for the project.
  
8. Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials:
  - a. See attached Exhibit A.
  
9. Contractor and/or supplier to provide a statement confirming the non-availability of the domestic construction material which is sought:
  - a. See attached Exhibit A.
  
10. Has the State received other waiver requests for the materials described in the request for comparable projects?

- a. We have attached one approved availability waivers for 316 Stainless Steel seamless tubing. Please reference Exhibit B.

11. Project Schedule:

- a. The affected project engineer's estimate for WW-628-02A is approximately [REDACTED]. The project's completion date is currently anticipated to be 10/13/2020. Time is of the essence on the procurement of these tubing as there are time constraints in which the contractor can construct certain portions of the project.

12. Engineering Discussion Re: 316 Stainless Steel Tubing:

- a. The tubing is used to supply high pressure hydraulic fluid (2000 – 3000 psi) for the new hydraulic power unit (HPU) to control wastewater influent gates. Operation of the gates is critical to ensuring the station and subsequently the Agency meets wastewater permit requirements.
- b. Poor quality, stainless steel tubing can lead to potential health and safety risks. Corrosion and cracks can leak the high pressure hydraulic fluid, leading to injury of facility personnel. As a result, the stainless steel tubing required for the BFS hydraulic system is required to meet very specific manufacturing requirements. These requirements are detailed in the material specifications and include metallurgy, temperature and pressure ratings, and thickness.

Sincerely,



**Jim Wang**

Construction Manager  
SFPUC - Construction Management Bureau  
525 Golden Gate Avenue, 6<sup>th</sup> Floor  
San Francisco, CA 94102  
[jwang@sfwater.org](mailto:jwang@sfwater.org)

Enclosures:

- Exhibit A – Supporting documentation including correspondence between Contractor, supplier and various manufacturers.
- Exhibit B – Approved availability waiver for 316 Stainless Steel seamless tubing

**DETAILED SPECIFICATION 15052G – STEEL AND STAINLESS STEEL PIPE  
CONTRACT NR-38**

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- F. Where flanges are shown, specified or required for connection of stainless steel pipe and fittings to pipe equipment, forged stainless steel weld neck flanges conforming to ANSI 150 pound or 300 pound standards for nominal pipe sizes larger than twelve (12) inches.
- G. Where flanges are shown or required for connection of 42 inch and larger stainless steel piping, flanges shall meet the requirements of ANSI/AWWA C207, except that the materials for the flanges shall be the same material as the host pipe.
  - 1. Flanges, flanged fittings and flanged joints shall conform to the applicable provisions specified herein for steel flanges, flanged fittings and flanged joints, except that steel bolting shall be stainless.
- H. Fittings:
  - 1. For nominal pipe sizes 2 inches and smaller shall be of the socket welding type conforming to the dimensional requirements of ASME B16.11, Class 3000. Fittings shall conform to the materials and alloy requirements of ASTM A403/A403M.
  - 2. For nominal pipe sizes 2 1/2 through 12 inches shall be the butt welding type conforming to the dimensional requirements of ASME B16.9. Fittings shall conform to the materials and alloy requirements of ASTM A403/A403M.
  - 3. For nominal pipe sizes 42 inches and larger, shall have fitting dimensions conforming to ANSI/AWWA C208.
  - 4. Filler material for welding stainless steel and alloys, P Number 8 base materials shall be in accordance with the following:
    - a. Material Type/Grade 304 shall use Type 308 filler material
    - b. Material Type/Grade 304L shall use Type 308L filler material
    - c. Material Type/Grade 316 shall use Type 316 filler material
    - d. Material Type/Grade 316L shall use Type 316L filler material
- I. All stainless steel pipe and fittings shall be precleaned, pickled and passivated after fabrication in accordance with Article 2.14.

**2.13 STAINLESS STEEL TUBING AND FITTINGS**

- A. Type 316L stainless steel, seamless tubing shall be in accordance with ASTM A269.
- B. Minimum Wall Thickness:
  - 1. Tubing shall be as follows:

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<b>Tubing Outside Diameter (Inches)</b>	<b>General Service</b>		<b>Hydraulic Power Unit System(s)</b>	
	<b>Working Pressure (psig)</b>	<b>Wall Thickness (Inches)</b>	<b>Working Pressure @ 100 °F (psig)</b>	<b>Wall Thickness (Inches)</b>
1/4	3000	0.035	5100	0.035
3/8	2500	0.035	3300	0.035
1/2	2500	0.049	5100	0.065
5/8	2500	0.049	4000	0.065
3/4	2500	0.065	3300	0.065
1	2000	0.065	3100	0.083
1 1/4	3600	0.120	3600	0.120
1 1/2	3400	0.134	3400	0.134
2	3600	0.188	3600	0.188

- C. Provide Type 316 stainless steel, flareless tube fittings in conformity with ASTM A276.
- D. Dielectric insulating joints or fittings shall be provided at connections between exterior piping and interior piping.
- E. All stainless steel tubing shall be precleaned, pickled and passivated after fabrication in accordance with the applicable sections of ASTM A380.

**2.14 SHOP CLEANING AND PICKLING OF STAINLESS STEEL PIPING AND WELDS**

- A. All stainless steel piping shall be thoroughly cleaned and pickled at the mill in accordance with ASTM A380.
- B. Pickling shall produce a modest etch and shall remove all embedded iron and heat tint. After fabrication, pickled surfaces shall be subjected to a 24 hour water test or a ferroxyl test to detect the presence of residual embedded iron. All pickled surfaces damaged during fabrication including welded areas shall either be mechanically cleaned or repickled or passivated in accordance with ASTM A380. Materials that have been contaminated with steel alloys or free iron shall not be used until all contamination is removed. When cleaning to remove steel or iron contamination is required, it shall be performed in accordance with ASTM A380, Code D requirements. All stainless steel surfaces shall be adequately protected during fabrication, shipping, handling, and installation to prevent contamination

This Waiver request was submitted to the EPA by the state of California. Supporting documentation from contractors, suppliers or manufacturers included as part of this waiver request was done so by the recipient to provide an appropriate level of detail and context for the submission. There may be documents and project diagrams, schedules, and supplier 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. If you need these documents, they are available upon request by emailing [CWSRFWaiver@epa.gov](mailto:CWSRFWaiver@epa.gov).