



# Central Valley Water Reclamation Facility

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Phillip Heck, Ph.D., P.E.

November 4, 2020

Mr. Skyler Davies, P.E.  
Utah Division of Water Quality  
195 North 1950 West  
Salt Lake City, UT 84116

Subject: Project Waiver of American Iron and Steel Requirements to the Central Valley Water Reclamation Facility Biological Nutrient Removal Project for convoluted Stainless Steel Back-up Rings for HDPE Piping

Dear Mr. Davies:

The specifications for the BNR/PEPS/RAS Selector project require the use of 316L Stainless Steel Convoluted Back-up Rings on HDPE flange adapters. The convoluted back-up rings were specified for use on the HDPE piping to reduce stress and weight on the piping joints to acceptable levels and to comply with HDPE piping manufacturer's warranty requirements. Conventional solid back-up rings and split or lap style back-up rings that are typically used with steel or other metal piping systems are significantly heavier and are not designed to distribute and control stress to the piping material as is necessary when using softer plastic piping materials. The Contractor plans to install the convoluted stainless steel back-up rings on HDPE piping systems that are part of the BNR/PEPS/RAS Selector project. We request a Project Waiver of American Iron and Steel Requirements to the Biological Nutrient Removal Project for Convoluted Stainless Steel Back-up Rings be submitted to the EPA for their consideration.

According to Section 608 of the Clean Water Act, CWSRF assistance recipients must use specific domestic iron and steel products that are produced in the United States if the project is funded through the SRFs. The EPA has the authority to determine whether it is necessary to waive this requirement based on certain circumstances set forth in Section 608(c)(2) of the Clean Water Act. The provision states that, "[the requirements] shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency...finds that – (2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality."

The Contractor has provided a letter and backup materials dated October 28, 2020 that is attached and provides information to the Project Engineer and Construction Manager (Brown and Caldwell) asserting that there are no manufacturers in the United States producing stainless steel back-up rings meeting the specification requirements for use on HDPE piping systems. As indicated in the letter, the Contractor contacted all of the manufacturers/suppliers identified by the EPA in their email dated October 10, 2020 to ascertain whether they could supply the specified back-up rings or a similar product. While some of the manufacturers could supply solid or split type stainless steel back-up rings, they were unable to supply convoluted back-up rings. Included with the information provided by the Contractor is a letter from Improved Piping Products, who is the patent holder of the convoluted back-up ring (Deltaflex®), claiming that, to their knowledge, there is not a convoluted style back-up ring for HDPE piping systems produced domestically that is sufficient and reasonably available.

Please contact me if you have any questions.

Sincerely,  
CENTRAL VALLEY WATER RECLAMATION FACILITY



Phillip Heck, Ph.D., P.E.  
General Manager

Cc: Brandon Heidelberger, P.E., Assistant General Manager  
Mark Hansen, Brown and Caldwell  
Neil Kunz, P.E., Brown and Caldwell

Enclosures: Gerber Construction Letter and supporting information dated October 28, 2020  
HDPE Piping Specifications  
Waiver Request Checklist  
ISCO Letter  
Improved Piping Products, Inc. Letter

**EPA NOTE:** This waiver submission includes references to proprietary items and brand name products. These references have been retained in order to provide context for the waiver submission. EPA evaluates a waiver request on the performance-based specification of 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 EPA. Contact [CWSRFWaiver@epa.gov](mailto:CWSRFWaiver@epa.gov) for more information.





To: Mark Hansen – Manager, Construction Services

From: Phil Duncan – Gerber Construction

Date: October 28, 2020

Subject: Response to EPA's Findings of AIS Compliant Stainless-Steel Backup Rings.

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Gerber construction reached out to each manufacturer/supplier recommended by the EPA as shown by the attached email string in *Appendix A*. Central Valley Water Reclamation Facility (CVWRF) and Brown and Caldwell (BC) have specified flanged HDPE connections to be with “Improved Piping Products – PPDI, Improved Piping Products – SS-SDR, or approved equal.” The backup rings called out are convoluted style backup rings designed and manufactured specifically for use with HDPE flange adapters.

Below is a summary of responses from each manufacturer contacted. Email correspondence, catalog sheets, and other pertinent information related to each manufacturer/supplier can be found in *Appendix B*.

### **Stainless Tubular Products**

██████████ Stainless Tubular Products was contacted. Stainless Tubular Products is able to supply stainless steel lap-joint style flanges manufactured by Felker Brothers Mill. Cut sheets for this product clearly show it is not a convoluted style ring and is not specifically designed or intended to be used with HDPE pipe. ██████████ indicated that in an HDPE application, Stainless Tubular Products could not stand behind or guarantee the performance of this product.





### **Marzolf**

██████████ Marzolf was contacted. Marzolf can supply a two-piece lap-joint style backup ring. This backup ring is not convoluted and is not specifically designed or tested in HDPE applications. Marzolf flanges would not carry any warranty or guarantee when used with HDPE.

### **CAB Inc.**

██████████ CAB Inc. was contacted. CAB Inc. declined to provide pricing or products stating they could not offer convoluted backup rings and could not quote an alternate without detailed drawings and specifications. CAB Inc. is able to machine custom parts, which would not conform to any of the applicable HDPE pipe standards and would not carry a guarantee or warrantee.

### **Texas Flange**

██████████ Texas Flange was contacted. Texas Flange does not stock or machine convoluted backup rings and would require dimensional drawings to provide quotation on an alternate. Texas Flange is able to machine custom parts, which would not conform to any of the applicable HDPE pipe standards and would not carry a guarantee or warrantee.



**Tube Craft Flange**

██████████ Tube Craft Flange was contacted. Tube Craft Flange declined to provide pricing or cut sheets for products. ██████████ stated that based on her research, Improved Piping Products may be able to supply what we are looking for. Improved Piping Products is the manufacturer called out in the specs who holds the patent for convoluted style backup rings, but these backup rings are not manufactured in the United States.