

Water Infrastructure  
ENVIRONMENTAL QUALITY

PAT MCCRORY

*Governor*

DONALD R. VAN DER VAART

*Secretary*

KIM H. COLSON

*Director*

November 19, 2015

Mr. Timothy Connor, Chemical Engineer, Municipal Support Division  
via e-mail to: [connor.timothy@epa.gov](mailto:connor.timothy@epa.gov)

Located at:

Office of Wastewater Management  
Environmental Protection Agency  
[cwsrfwaiver@epa.gov](mailto:cwsrfwaiver@epa.gov)  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Subject: AIS Availability Waiver Request  
Winston-Salem and Forsyth County  
City/County Utilities Commission  
Muddy Creek Consolidated Pumping Station  
Engineer: Black and Veatch  
Contractor: Layne Heavy Construction  
Project No. CS370399-08

Dear Mr. Connor:

The North Carolina Division of Water Infrastructure (Division) has reviewed the information provided by the Contractor, the Engineer, and the City of Winston Salem for CWSRF Project CS370399-08 submitted on November 19, 2015. The following information is provided to EPA requesting AIS Waiver for TR Flex restrained joint fittings for Ductile Iron Pipe.

The city has previously been granted an AIS Waiver for TR Flex pipe fittings of smaller size and now needs and requests a Waiver for larger size TR pipe fittings, specifically 30" bends of various angles. A waiver for these same larger sizes and type of TR Flex pipe fittings was granted to the City of Belton Missouri.

Manufacturers and suppliers of DIP TR Flex pipe and fittings for this job are McWane Ductile, 800.800.6013



State of North Carolina | Environmental Quality | Water Infrastructure

1633 Mail Service Center, Raleigh, North Carolina 27699 | Location 512 N. Salisbury Street, Raleigh, North Carolina 27604

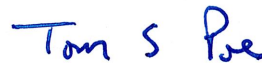
919 707 9160 T

These TR Flex joint pipe and fittings were specified by the Engineer and the City due to the nature of the wastewater fluids to be conveyed, operating pressures and surges, proximity to streams and wetlands, ground conditions, soils, rock, conflicts with other large pipelines, several creek crossings, previous experience, and professional judgement. The TR Flex fittings are used throughout the project in many locations.

These fittings and pipeline sections are scheduled to be placed very soon and delay will adversely impact the overall schedule of this project. Additional information will be provided if needed and as requested.

The Division's regular construction inspections of CW and DW SRF Projects cover loan administration, construction, and SRF Requirements. If you have any questions or comments, please contact me at (919) 616-4245 or at tom.poe@ncdenr.gov.

Sincerely,



Tom S. Poe  
Construction Inspector

TSP/dr

Attachments:

AIS Waiver Guidance, Process, and Checklist

Project Specifications for Ductile Iron pipe and fittings

Shop Drawing of TR Flex 90, 45, 22-1/2, 11/1/4 Deg. Bends

Copy of Waiver previously issued to Winston Salem for similar TR Flex fittings of different sizes

Copy of Waiver issued to City of Belton, Missouri for similar and same (30") Ductile Iron Fittings.

cc: Layne Heavy Construction

Terry Cornett, P.E., Black & Veatch Corp.,  
1277 Millerwood Drive, Winston-Salem, NC 27106

Mr. Ron Hargrove, Utilities Director  
Winston-Salem and Forsyth County City/County Utilities Commission

Seth Robertson, P.E., Mark Hubbard, P. E, Ken Pohlig, P.E. DWI Supervisors

NC-CWSRF Project File





IRON STRONG

**Project:** Muddy Creek WWTP, Influent Transfer Force Main  
**Location:** Winston-Salem (Forsyth County), NC  
**Contractor:** Layne Heavy Civil

### McWane Ductile Fitting Weights\*

<b>Cement Lined TR Flex &amp; MJ (Plugs) Fitting Weights</b>			
<b>Qty</b>	<b>Desc.</b>	<b>Wt (lbs)</b>	<b>Extended Wt</b>
1	30" TRF 90	1532	1532
27	30" TRF 45	1279	34533
13	30" TRF 22.5	1241	16133
12	30" TRF 11.25	1195	14340
2	30" MJ Plugs	660	1320
			<hr/> <b>67858</b>
<b>Epoxy Lined (Protecto 401) TR Flex Fittings</b>			
<b>Qty</b>	<b>Desc.</b>	<b>Wt (lbs)</b>	<b>Extended Wt</b>
1	30" TRF 90	1532	1532
2	30" TRF 45	1279	2558
1	30" TRF 11.25	1195	1195
			<hr/> <b>3753</b>
		<b>Total</b>	<b>71611</b>

**\* All weights are bare metal weight only - they do not include any applicable lining**

This waiver request was submitted to the EPA by the North Carolina Division of Water Infrastructure. All supporting correspondence and/or documentation from contractors, suppliers or manufacturers included as a part of this waiver request was done so by the recipient to provide an appropriate level of detail and context for the submission. Some referenced attachments with project diagrams, schedules, and supplier correspondence are 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. They are available upon request by emailing [SRF\\_AIS@epa.gov](mailto:SRF_AIS@epa.gov).