



## Our Latest Gas Piping Project For Henrico County



### Project Description

Methane is emitted during the handling of municipal wastewater through the decomposition of organic materials. Wastewater facilities are said to account for almost 7% of total global methane release. Most wastewater plants in the US, including the one in Henrico County, try to best utilize this renewable energy source. Large amounts of methane are currently captured and used to provide fuel for furnaces, boilers or other onsite equipment.

In most cases, more methane gas is produced than can be economically reused and the additional gas must be sent to the flare stacks. Waco understands how these systems work, so when Henrico County Department of Public Utilities realized the need for a relocation of a digester waste gas pipe we were more than pleased to offer our expertise.

Waco worked with engineers from Hazen & Sawyer to determine and implement the best configuration for the piping system. The current piping was run underground to the flare stacks. It was determined that the new piping would be run above ground to comply with proper inspection requirements for hydrocarbons. This would require Waco to form and pour concrete culverts and foundations to support the new piping and valves. The scope of the original job called for carbon steel piping with an epoxy lining. Waco worked with the engineers and the owner to determine stainless steel piping should be used instead. They agreed to use 14 inch diameter stainless steel piping, which would run 175 linear feet, from the digester penthouse, across the penthouse roof, to the existing waste flare stacks. All the piping would be TIG welded and tested to insure that a no leak system was in place. This change to stainless steel piping resulted in a nearly 75% weight reduction and eliminated one major step in the construction process. Waco was able to complete the project including the demolition of the original piping within a 4 month time frame, without the need for overtime work.

The project also required adherence of NFPA 820 standards for fire and explosion protection in wastewater treatment and collection facilities. NFPA 820 standards provide guidelines for the ventilation, construction materials and electrical equipment used in the assembly of certain piping systems. The standards also call for a specific degree of protective measures against fire and explosive hazards.

Waco is equipped to provide the best solutions for a wide range of construction needs—from piping systems like the one above to abatement & removal projects and much more. For more information, contact Waco at 888-822-7285.

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#### Other Locations

