

Project Profile

*Blue Rhino
Hamptonville, NC*



Background

In 2007, Blue Rhino, located in Hamptonville, NC, contacted AdEdge Technologies, Inc. (AdEdge) to install an iron and manganese treatment system. The amount of iron (5.6 mg/L Fe) and manganese (0.6 mg/L Mn) were well above the maximum contaminant levels of 0.3 mg/L Fe and 0.05 mg/L Mn respectively. The pH of the Blue Rhino site (6.10) was quite below the maximum contaminant level. Blue Rhino uses approximately 3,000 gallons of water per day. The table to the right provides the water-quality baseline parameters of Blue Rhino. The following paragraph details the system and its operation.

pH	6.1	
Hardness	80	mg/L @ CaCO ₃
Alkalinity	78	mg/L @ CaCO ₃
Sulfate	11	mg/L SO ₄
Iron	5.6	mg/L Fe
Manganese	0.6	mg/L Mn

Treatment System

The AdEdge AD26 treatment system consists of a dual vessel modular system configured in parallel. Rated for 13 gpm, the iron and manganese removal system utilizes the AD26 media used for oxidation and filtration. Iron and manganese that is not oxidized becomes catalytically precipitated and then adsorbed directly on the media. Blue Rhino also has a granular activated carbon (GAC) twin vessel system that reduces the amount of volatile organic compounds (VOCs) in the drinking water. Sodium hypochlorite is added to the system before the AD26 media to maximize the contaminant removal. A pH control module using potassium hydroxide is used to bring pH to a target range of 7.5 to 7.8. The AdEdge AD26 system was installed in June, 2007, and has been in operation since then.



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