

# Project Profile

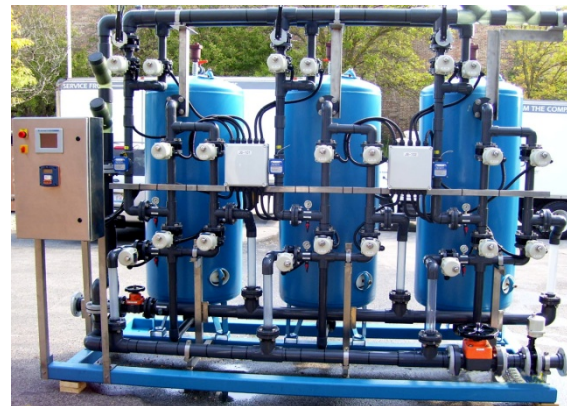
## Ramah Pine Hill Water System

### Ramah, New Mexico



#### Background

The Ramah Navajo Chapter owns and operates the Ramah Pine Hill water system located in Ramah, New Mexico. The water system is served by one well that provides drinking water for the community's residents at a maximum of 130 gallons per minute (gpm) with an approximate arsenic concentration of 18 parts per billion (ppb) and iron concentration of 1.70 milligrams per liter (mg/L). In order to meet the EPA (MCL) of 10 ppb, SRS Construction, contractor for the Ramah Navajo Chapter, contracted with AdEdge Technologies Inc. (Adedge) to supply an arsenic/iron water treatment system capable of reducing arsenic and iron concentrations in the water-supply well.



#### Treatment System

AdEdge installed a AD26-160CS-S-3-AVH, oxidation/filtration unit, capable of treating up to 160 gpm. The packaged system features three 30-inch diameter carbon steel adsorption vessels mounted on a stainless steel skid utilizing AdEdge AD26 media. The system includes a chlorine feed pretreatment module to provide oxidation, and is equipped with automated control valves and harness, central control panel with programmable logic controller (PLC) and a color user interface touchscreen. The System also features control panel and local gauges, flow sensors & totalizers, and a central hydraulic panel with sample ports for a complete functioning packaged unit. The system control panel also provides control and interlocks with booster pumps, a water truck fill station card reader and a building security system. The system was designed to accommodate and facilitate a future connection to a much larger distribution system as planned by the Indian Health Service (IHS).

Priority Parameters		
pH **	7.43	
Total As **	0.018	mg/L As
As(III)	0.017	mg/L (if known)
Sulfides**		mg/L
Hardness **	440	mg/L @ CaCO3
Alkalinity **	170.0	mg/L @ CaCO3
Silica **	17.0	mg/L SiO2
Phosphate **	ND	mg/L P04
Sulfate **	330.0	mg/L SO4
Iron **	1.70	mg/L Fe
Manganese **	0.03	mg/L Mn

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#### Performance

After system installation, a one-week full scale study was performed to demonstrate system performance and to fine-tune system parameters, due to unexpectedly high groundwater temperatures. The system continues to remove arsenic to non-detect levels, to remove iron to < 0.05 parts-per-billion and to remove manganese to non-detect levels.

#### For More Information Contact

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