

Spot light on Oshkosh

The City of Oshkosh, like most communities in the western river valleys in Nebraska are currently dealing with arsenic and uranium problems.

Bill Campbell, the Cities Utility Superintendent and Scott Smith, the Cities Water Operator were notified that their west well tested 86 micrograms per liter uranium, well over the limit allowed by the new regulation. The nitrates were also on the rise in this particular well. This well had been one of their main wells for the system; it was drilled in 1964 and pumped 400 gallons per minute.

The city also has three other wells that have been tested with good results. The north well was drilled in 1946 and produces 400 gallons per minute, a small well in the center of the city and the system's east well produces 800 gallons per minute. The east well was drilled in 1974 and was rarely if ever used. The well was actually too large for the system to handle.

Bill and Scott knew they couldn't supply the city without the west well so the use of a variable frequency drive (VFD) was discussed for the 800 gallon per minute east well. They felt if they could slow this well down with the VFD they could utilize this well and begin using it. The city requested bids, and a VFD was installed on the 60 horse power motor for approximately 6,500 dollars. The well now operates off of system pressure and will ramp up or down as needed to maintain a preset optimum pressure.

A VFD was also installed on the 25 horse power north well and is programmed so it will ramp up to and run at 400 gallons per minute. When the tower is full it ramps back down and shuts off with no water hammer. This VFD costs approximately 3,500 dollars.

With the use of the VFD's on these two wells and the small well in the center of the City, they are now able to produce plenty of good quality water for their customers. The west well is no longer used for potable water.

Many communities in the western river valleys are looking for new well fields out of the valley for suitable water supplies. Unfortunately this is their only option short of treatment; these systems are forced into spending hundreds of thousands of dollars to gain compliance for their systems. With the use of VFD's the City of Oshkosh was able to avoid this expense.