

Checking and double checking paramount in nuclear power



An interview with Pat Brandt of Dominion

Mr Brandt, who do you work for?

I am employed by Dominion, one of the largest producers and transporters of energy in the USA. Our portfolio includes some 26,500 megawatts of generation, 7,800 miles of natural gas transmission pipeline and 1 Tcf of proved natural gas and oil reserves. Dominion also owns and operates the nation's largest underground natural gas storage system and serves retail energy customers in eleven states.

And where are you located?

At the Kewaunee nuclear power station. Kewaunee is located in Carlton, Wisconsin, on Lake Michigan about 35 miles southeast of Green Bay and three-hours drive north of Chicago. There we generate 568 megawatts of electricity from a single unit. That's enough to meet the needs of 140,000 homes. The station began commercial operation in 1974 and was acquired by Dominion in July 2005.

What is your job title?

I am an instrument controls technician, working on air-operated valves. Mostly I'm busy with the actuators and positioners, not the valve itself.

What does your work entail?

It's a nice mix of desk and field work. For example, performing calibration of pressure or temperature gauges.

What do you enjoy most in your job?

The chance to work and learn together with my colleagues in the shop. Everyone has a very professional approach to their jobs. I joined the company three years ago and incoming colleagues like myself receive a lot of support from seasoned co-workers.

What's been the biggest eye-opener for you since joining Dominion?

Seeing just how well scheduled and regimented this industry is. In my prior job, an equipment failure had to be repaired immediately as otherwise the plant could lose money. Here, the whole focus is on safety first and foremost. You check and double check before taking action, but the idea is always to try and prevent problems from occurring in the first place.

What's your view on digital technology?

We used it a lot in my previous workplace. I expect digital equipment will, slowly but surely, be increasingly deployed throughout the nuclear industry. Certainly in the new plants, and also during retrofitting activities at existing units. Partly because analogue equipment is becoming obsolete and also because the people with the experience to use them are leaving the industry. But in the nuclear sector it does take time to have new technology approved and implemented, which again is quite a

different experience from my prior job within general industry.

You are located at the top of Lake Michigan. Does it get cold up there?

For certain! That's why all the equipment has been insulated. Equipment can also be heated or cooled depending on the season. When the temperature drops it can be both an advantage and a disadvantage from the operational viewpoint. An advantage because we draw water from the lake for cooling, and so at low temperatures we can turn off one of the circulating pumps, so saving money. At the same time, we have to be aware of a condition called "frazzle ice", which is when the lake doesn't actually freeze, but the water gets "slushy". Of course we have systems in place, such as bubblers, to cope with that.

One final question: what does Kewaunee mean?

The exact translation of "Kewaunee" is uncertain, but is commonly believed to be a Native American word meaning "river of the lost."



Kewaunee Nuclear Power Station

