



MISSION-CRITICAL PROFILE QUESTIONNAIRE

Name: Grant Gilley

Organization: EBMUD

Job Category (Check one below):

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|---|--|
| <input type="checkbox"/> Water Treatment | <input checked="" type="checkbox"/> Electronic Maintenance Technician/ Instrument Technician |
| <input type="checkbox"/> Water Distribution | <input type="checkbox"/> Electrician/Electrical Line Worker |
| <input type="checkbox"/> Wastewater Treatment | <input type="checkbox"/> Machinist/Mechanic |
| <input type="checkbox"/> Wastewater Collections | <input type="checkbox"/> Other |

1. Please describe the work you do:

Install, repair, and maintain instrumentation which monitors and controls industrial processes. I commonly check to see if sensors in the field are reporting accurately, troubleshoot equipment or communication faults, or perform routine testing to find malfunctioning field devices, before they present a problem.

2. What combination of education, vocational training, apprenticeship, experience, and/or skill did you obtain in order to be qualified and selected for your job?

I worked with tools such as wrenches, ratchets, taps, dies, drills, impact tools, and other hand tools, since I was young (my family owns a farm equipment manufacturing plant in Fresno). At age 23, joined Navy as Electricians mate and developed electrical controls troubleshooting skills. AT age 27 left Navy and hired on at 700MW old power plant. Quickly improved instrumentation and electrical skills, under instruction of senior technicians (having an average of 20 year experience each). Since I previously had limited electronics and computer controls training, took classes at LMC to increase skills. At age 31 hired on with EBMUD.

3. What do you like best about your job?

The versatility of this work is nice: We do work that engages us physically and mentally. Room for growth (challenging work): As we are often working with aging infrastructure, we are wrought with controls that can be improved. Great cost savings and reliability improvements can be created and implemented at my level. I feel like I have the ability to make a difference. I also feel like my job is important. If large groups of people stop having drinking/cooking/bathing water, or all their toilets back up, the true importance of what we do can be seen (fortunately this doesn't happen, partly because of the work that my group performs).

4. Please tell us about the projects and activities you have enjoyed most in your work in the water/wastewater field, and what made them rewarding,

I was allowed to change the controls programming for 5 large centrifuges, due to old controls programs which had not been properly maintained through the years. Maintenance requirements were very high and the units were being rebuilt too often due to equipment not properly protecting itself. I was given time to learn how to program the controls, to better control internal torque and equipment stress. Through the process, I collected, consolidated, and improved documentation for the centrifuges. Getting these big problems fixed in-house, impressed Operations group and they started asking for other 'broken' things to get fixed.

I have participated closely in a recent project that involved taking emergency water supply due to the drought. EBMUD had to install a couple million dollars in new equipment, to deal with the issues involved with the new water. I had to install 2 new alkalinity sensors, and a flow totalizer unit. Both of the units had never been used before, so it was a challenge to make sure they were both working on time. I was also a key player during startup of CO2 injection skids for the project, working closely with design engineers to deal with bugs.

I get the strongest satisfaction from my work, when I feel like I have contributed. Some days the contribution is simply getting the grunt work done (but properly), but even instrumentation grunt work is really not that bad.

5. What qualities and capabilities are needed in order for a person in your area of expertise to be successful in the water/wastewater industry?

Knowledge of math, computers, science, and skills with hand tools are very helpful. Basic AC/DC electrical theory, industry terminology, familiarity with equipment (purpose/manufacturer/programming), and electrical systems familiarity/troubleshooting skill are all highly sought after. The only thing different about this job is the fact that knowledge of chemistry is helpful as well, where at most places it isn't as important (but is always helpful). Something often overlooked but always important with any job requiring a lot of interaction, is people skills and/or ease of working with; it is very important that you can deal with people well.

6. Do you have any advice for an individual who is considering pursuing a career in your field in the water/wastewater industry?

If you are near Pittsburg CA, take ETEC classes at LMC. Pay attention and take notes (just writing down the info helps it absorb). Don't cheat because you only cheat yourself out of a better chance at a job. Try and get jobs working with your hands, around industrial equipment (even if the job is mechanical and pays less than ideal, you can take classes on the off-shift and gain experience, and leverage the work to get a foot in the door elsewhere). If you are not near LMC or another community college with a strong technical training program, you can still take college classes that will help improve many of your skills (e.g. physics, chemistry, math, writing, creative arts, speech, etc.).