

I acquired my Bachelor of Science in Civil Engineering at XXX College (nationally accredited by the Accreditation Board for Engineering and Technology). I am also a Registered Professional Engineer, having passed the national exam in 1995. I take continuing engineering education courses (CEUs) and stay current in my field. I have received Special Achievement Awards, and three Cash Awards for Exemplary Service during my employment at the EPA. I also received two cash awards at the FDA as a Consumer Safety Officer. I possess an academic and practical hands-on understanding of the chemical, electrical, and mechanical engineering fields. Specifically because of the diversity of cross-disciplinary engineering skills that I have applied to my work on a daily basis, I am confident that I will be highly capable of integrating the chemical, electrical and mechanical engineering processes in the delivery of patient care services. I can handle complex technical project management issues as they arise, and provide the guidance required in making risk assessments.

My **chemical engineering background** has been sufficiently tested through my work as *a Water Supply and Waste Water Engineer, and Hazardous Waste Manager*, where I analyzed laboratory test samples from water supply and waste water treatment plants. My task was to identify and evaluate each chemical contaminant (benzynes, asbestos, arsenic, carbontetra-chloride, cyanide, etc.) to determine the health effects of each on humans. I conducted routine reviews to ensure plant compliance with the mandated discharge permit limits.

As a *Consumer Safety Officer with the FDA*, I identified potential sources of chemical contamination during food and drug manufacturing inspections. I inspected 35+ food manufacturers engaged in the production of bakery products, fresh fish, and frozen foods. I assessed which chemicals were being used to ensure that their exposure to air was not deleterious to the consumer. These facilities were located throughout New England, and were worth a combined total of \$250M+. I was highly involved in inspecting drug component suppliers, but focused on food manufacturing facilities (XXX Seafoods, XXX Farms, XXX Sea Foods, and lobster suppliers). Some plants were as large as 12000 sq. feet. I ensured that the uses of any and all relevant disinfectant agents and cleaning chemicals were employed properly and reviewed their accompanying material safety data sheets (MSDS). I also observed the safeguards employed during chemical use inspections to monitor cross-contamination.

As a *Water Supply Engineer* at the EPA I inspected the usage of chemical additives to the water supply (chlorine and fluoride) and observed the handling of equipment and appurtenances (feed pumps, feed lines, calibration of equipment) to calculate chemical feed dosage rates. I analyzed water supply concentrations for chlorine and fluoride levels, and wrote reports, making recommendations. I assumed fluoridation engineer responsibilities to calculate chemical feed ratios and their injection into the water supply at different facilities (between 75 and 100) to enable the operator to determine the proper flow rate of water per day, and to gauge the chemical feed for the speed pumps and chemical concentration infusions into the water supply.

My **electrical engineering background** has developed on a practical level. When conducting inspections, I was required to analyze the electrical and mechanical processes at the facilities which I inspected. I have observed between 50 and 100 installations of chemical feed pumps, which requires an understanding of the machinations of the various electrical wirings involved in grading pumping systems.

My **mechanical engineering background** was furthered in my various job capacities with the FDA and EPA. When I was employed in the Consumer Affairs Division of the FDA, I was tasked with auditing and monitoring medical device studies, after their completion, to ensure that each mechanical component was traceable back to the manufacturer. I had to interview administrators at the hospital facilities and speak with doctors in charge of the studies to ensure that all devices were returned to the manufacturers. The audits involved in-depth interviews to understand how devices were owned and used by the manufacturer. In each audit that I conducted, I have had to use my professional engineering background to perform the mathematical calculations to determine how the derivation of the mechanical device plans.