

During World War Two, the Secret City was built to help with a government project called the Manhattan Project. During this time the Secret City of Oak Ridge was built. Before the city could truly be established, water had to be made readily available, thus the building of the city of Oak Ridge Water Treatment Plant was completed on Chestnut Ridge. During this eight-week intern opportunity, I gained experience in the real-world work place. I also got to see first hand all the hard work that is put into managing and keeping a water treatment plant in regulation set forth by the Tennessee Department of Environmental Control (TDEC) and Environmental Protection Agency (EPA). While interning this summer, I gained substantial knowledge of the responsibilities held by me under the supervision of the plant operators on duty. Some of my most important responsibilities included pulling over 40 bacteriological water samples from numerous locations (commercial, municipal, and residential) spread throughout the distribution system and processing them to look for the presence of coliform bacteria, and more importantly, the presence of e. coli. After the processing procedure was complete, the chain of custody and analysis sheet had to be completed, which is extremely important because this paperwork has to be turned into the state of Tennessee and kept on file at the water treatment plant for several years. During this time, I was also involved in assisting my

supervising co-worker with the selection of new bacteriological sampling sites and helping schedule what days the samples were to be pulled for the month of July 2015. After all the bacteriological samples were pulled and lab work completed for the day, I assisted water treatment plant operators in obtaining hourly data, such as the turbidity of raw and finished water coming into and leaving the plant, chlorine levels in clear well, and the flow and water pressure the plant is having to produce to keep up with the demand of water, transferring of chemicals (i.e. coagulants and fluorosilicic acid) from storage to the day tank, and also assisted in the changing of chlorine cylinders.

During this amazing opportunity, I learned numerous work-related skills such as being on time, the importance of recording all events accurately in work order form, and also the chain of custody and analysis form. One of the most important lessons I have learned in teamwork in the workplace allows for a healthier and more productive atmosphere, which increases the success rate of most projects. For example, one day we had to drain and clean the settling basins on the east end of the plant; it was extremely hot that week, so we decided to start a little earlier than normal. We started the task early that morning to avoid being out in the hottest part of the day and, through great teamwork, we completed the task early. This lesson in teamwork is what I want to bring back to Sewanee with me. If the community of Sewanee continues forward with great teamwork, anything will be possible.

While interning at the City of Oak Ridge Water Treatment Plant, I have

learned that I really enjoy working in this field. It is important to have all your responsibilities completed in a timely and accurate fashion, because when dealing with a community's water source your actions could seriously harm or even be fatal to individuals in the community, which could lead to criminal charges. This internship opportunity has shown me that I have picked the right course of study in Environmental Sciences at Sewanee. I hope to take this knowledge back to Sewanee with me to help further my course of study and bettering the community. I also hope to take all the contacts and new friends I have made and continue our relationship with the possibility of being beneficial to each other in the future.