

Water Dawgs Lead the Way!:

The Army's Water Treatment

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When soldiers are sent to war, they are sometimes put in situations that will provide challenges to get the proper amount of water supply they need to maintain their everyday functions such as showering, washing their clothes and of course, drinking water. In the U.S. Army, there are many situations where men and women deploy, and they have to go miles out of their campgrounds to get a reliable water source. The soldiers who provide a reliable water source for their camp grounds if it lacks water supply or the resources are unreliable are called water treatment specialists. These people are also called “92 whiskeys” as their shortened job title or “water dawgs” among their peers. The specific and defined job title of a water treatment specialist is to install, operate and maintain equipment used in production, storage and distribution of potable water. While in their advance individual training course, a water treatment specialist will learn how to properly pick safe and evenly leveled water sites, clear of any type of danger, test the water site for biochemical, radiological and nuclear agents, purify the water being tested and approved, store and distribute the purified water to fellow soldiers as needed.

The first thing a water treatment specialist in the Army will do is conduct a water source search. In places of deployment such as Iraq and Afghanistan, it is hard to find a reliable water source near because of the climate and weather. “When I was in Iraq, we were in parts of the desert where water was so far away, it took about two days at a time to get clean water. We just had to drink and stretch the water we already had in the water buffalos so that we could survive” (Matthew Owens, personal communication, May 5, 2012). With both areas being common deployment areas and them both having desert terrain, a water treatment specialist will have to find a stable and flat ground and a large body of water to supply their unit. Usually

a sergeant and lower enlisted soldiers will be the people to search for such sites. If the site meets the minimum requirements of what they need to test, purify and distribute water, then the testing site will be ready for testing to be conducted.

After the site has been selected, the water treatment sergeant then instructs the lower enlisted soldiers to prepare the testing kits they will need to determine whether or not the water can be purified. A location that is more likely to be used as a testing site would be a place such as a small pond, river, well or lakes near the unit's camp site. Though these sites are the most commonly used, there have been situations where swamps and marshes have been safe enough to use. There are five tests that are conducted before the water can be purified. The first test given is the water quality analysis set, also known as the WQASP. In this testing process, a turbidity and PH test is given. Turbidity is a muddy or unclear condition of natural raw water caused by contamination being held in suspension (*Water Training*, Vol. A, 2010, p. 44). PH is the measurement of acidity and alkalinity in water and along with the turbidity, it needs to be brought down in the water source. Both tests are given to determine how much decomposition of large solids to small the raw water source will need when purifying. If the turbidity of the water is too high to clear, then the water will not be tested any further because it is too muddy to run through the purification machines.

After those tests are done, the Lewisite test is given to detect and identify harmful amounts of chemical agents present in the raw water. Following the Lewisite test, the nerve agent test is conducted to verify any harmful agents that the Lewisite missed. The last two tests that are given are the cyanide and mustard tests. These tests point out whether or not the

water could have been contaminated on purpose or have a natural effect. After all of the minor water contamination tests are finished, the radiological test is processed. The purpose of this test is to locate and measure radioactivity in the form of gamma rays and beta particles (*Water Training*, Vol. A, 2010, p. 46). This test has the most steps, so it is the last to be used.

When the testing is finished and approved, the soldiers then unload all the purification equipment. There are four different types of purifying machines that the army uses. These machines are all used in various bodies of water when soldiers deploy. Each machine will take about three to five soldiers at a time to unload and set up. The smallest machine is called the lightweight water purifier, also known as the LWP. The LWP produces 75 gallons of drinkable water per hour for salt water, 125 gallons for fresh water and stores up to 1,000 gallons at a time. The LWP is usually used for small numbers of people and or bodies of water. The next to smallest purifying machine is the 600 reverse osmosis water purification unit (ROWPU), which produces 10 gallons per minute (gpm) and 600 gallons per hour (gph). This is the most commonly used purifier because it is the easiest to set up and produces a great amount of water. The ROWPU can store up to 3,000 gallons of water at a time. The third purification device used in the Army will be the tactical water purification system, also referred to as the TWPS. The TWPS is typically used in cold weather environments but also in areas where there will be a larger body of water being used, such as an ocean. This machine can store up to 15,000 gallons of water and produces 125 gpm. The last purifier used in the Army is the 3,000 ROWPU, which is also used in cold weather areas but produces only 3,000 gallons of water per hour and 110 gallons per minute. The 3,000 ROWPU is the second most likely machine to use because its set-up and operation tasks are much quicker than the others.

All things considered, water treatment specialists are primarily responsible for supervising and performing installation of water purification equipment. It is important for our soldiers to receive the proper source of water to stay hydrated in order to perform their duties. Without the “water dawgs,” the soldiers would probably have to travel for miles to obtain the proper source of water to do everyday functions needed in battle. All of the tests and equipment presented are necessary for their survival. Without the water dawgs doing what they know best by testing, setting up and purifying water, the soldiers would be missing one of the most important things they need in life.

References

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