Konbit Sante and Hospital Workers Replace Water Main in June 2007

Sully Exavier (plumber with JUH), Bon Jacques (water system operator for JUH), Hugh Tozer (a volunteer with Konbit Sante) and several other workers replaced 280 feet of water main from the existing well to the elevated storage tank. The existing 2-inch galvanized steel main was old, leaked, and it passed through a burning medical waste pile. Frequent power outages and the resulting loss of pressure in the main allowed contaminated water to infiltrate the galvanized joints. Water throughout the hospital was contaminated with bacteria and pathogens.

Pasteur excavates existing main at base of water tower

The original plan was to bypass the medical waste pile with a new plastic water main. Construction of a solid waste disposal area along the proposed route left no option but to run the new main along the existing pipe route. The plastic pipe was buried about 18 inches, there were no joints within 50 feet of the waste pile, and the pipe was covered with concrete in the vicinity of the waste.

Plastic pipe in trench along side abandoned water main

Concrete encasement protects water main in medical waste landfill

Hospital staff completed the trench excavation in a few days. The crew installed the pipe in less than three hours, and poured concrete a day later. The new main eliminates a significant source of water contamination and was an important step toward improving health care at the hospital.

Plastic pipe will be used in the future to replace other sections of the distribution system. For example, the discharge pipe from the water tank is also damaged. Bon Jacques pointed out a valve on the line that was so damaged that it would allow surface runoff to enter the pipe and it could not be used to shut off flow.

Konbit Sante Works to Restore Water Pump Power Supply in November 2007

Since a construction accident on "L" Street in January 2007, Electricité d'Haiti (EDH) has provided only single phase power to the hospital. The existing well pump runs on 208-volt, 3-phase power. The pump will only run when there are three phases, which means it only runs when the 135 kVA generator runs, perhaps six to eight hours daily. This limits the well water supply at the hospital to less than 2000 gallons per day, about five percent of the water needed by the 250-bed hospital.

Konbit Sante evaluated several options for correcting this problem, including replacing the pump and modifying the power supply. Conversion of 1-phase power to 3-phase power was selected as the best short term approach. It allowed use of the existing pump and would simplify the future installation of a backup power supply.

Gary installing new electrical system for well pump

Mike O'Neill and Gary LaClair installed a variable frequency drive, transformer, and other equipment in the pump house. The hospital replaced the pump house roof and repaired holes in its masonry walls.

The installation was not completed because the wire from the electrical panel to the pump house had several splices that went to serve other areas, and it lacked a ground. Some wire remained from a previous project, but it was insufficient to complete the work and the required wire could not be purchased in Cap Haitien. The project will be completed in 2008, after shipment of the required supplies.

Bon Jacques – Water System Operator

Automated Water Pump Controls Modifications Await Electrical Improvements

The well pump controls will be changed as part of the electrical system improvements. With erratic power from the municipal supply, often arriving in the middle of the night, the well does not produce nearly the volume of water that it could. Bon Jacques must manually restart the pump when the power returns, which is not a practical option in the middle of the night. By changing the controls, the pump will run whenever there is power.