Steam Sterilization Plant (SSP)

U.S. ARMY MEDICAL RESEARCH INSTITUTE OF INFECTIOUS DISEASES

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PROJECT:

Replace the steam sterilization plant that supports the U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) replacement laboratory.

BACKGROUND:

The existing USAMRIID Biological Safety Level-3 and -4 laboratories in Bldg 1412 and Bldg 1425, were previously supported from an old SSP (located in B-375), constructed in 1953. Under a FY2006 military construction project, a new SSP was constructed in Bldg 8150; however, due to construction deficiencies, the building was deemed non-mission capable and was never used to process any effluent. Currently, the effluent from existing BSL -3 and -4 laboratories is treated by thermal effluent decontamination systems (TEDS). The project is needed to replace the defunct SSP and provide a long-term solution with adequate capacity for the required treatment of wastewater effluent necessary to support operation of the USAMRIID BSL-3 and -4 laboratories to be housed in Bldg 8100.

WHAT PRODUCES WASTE:

- About 50% of the liquid waste produced will be from personal showers. The protocol for personnel working in the laboratories is to shower in and out of the BSL -3 and -4 suites.
- Cleaning the vivarium rooms (when the technicians wash down the animal rooms) produces 45% of the effluent.
- Liquid waste generated as a direct result of the medical experiments produces approximately 5% of the effluent.

HOW IT WORKS:

Process waste flows from labs to collection tanks → **Then to a filtration skid to remove solids** → **Recirculates to the collection tanks for storage then flows through to the Effluent Decontamination System (EDS) in the SSP for thermal deactivation** → **After treatment through the EDS thermal process units and cooling, the deactivated effluent is released to sanitary drain**

THE SSP PROVIDES DECONTAMINATION REDUNDANCY TO PROVIDE THE HIGHEST LEVEL OF SAFETY TO WORKERS AND THE PUBLIC.

FOR MORE INFORMATION, VISIT THE **PROJECT WEBSITE**.

US Army Corps of Engineers