

History of Grissom Wastewater

The wastewater facility at Grissom was originally designed in 1942. The facility was built with the following:

- 1 primary tank
- 2 aeration tanks
- 1 final tank
- 1 anaerobic digester
- drying beds

This facility was used for the original base infrastructure. The plant was adequately built for the time. It then went through multiple upgrades through the years as follows:

- 1956 – anaerobic digester, aeration tank, final tank, and primary
- 1960 – drying beds
- 1962 – sludge gas storage, generator and fuel storage, grating and water pump
- 1965 – digester roof
- 1967 – anaerobic digester, aeration tank, and final tank
- 1976 – drying beds, 2 primary tanks, primary sludge building, generator, chlorine contact tank, grit system, comminutor, final tank
- 1985 – digester mixer, influent metering, pumps
- 1992 – Demolition of old plant components, sequencing batch reactors, controls and equipment

The upgrades listed outline the major components which were improved. Several other items were improved in the upgrades that are not listed. All of the upgrades listed had an impact on the treatment capacity of the facility mostly due to population growth on the base.

After the 1992 improvements the base was deactivated in 1994. The wastewater facility was then operated by the Grissom Redevelopment Authority (GRA) and experienced a drastic decrease in flow and loading as the military personnel left the base. Soon after, properties once occupied by the Air Force and the support staff began to become available to the public. Housing was sold to a private company and private residents began moving to Grissom. Businesses and industry also began to move to the former base. Then in 1998, the State of Indiana built the Miami Correctional Facility. These changes resulted in increased flows and loadings to the facility.

In 2000, the facilities were transferred from the GRA to Peru Utilities through a public benefits transfer from the United States Department of Health and Human Services. The utility operation was steadily growing as more and more customers began moving into the base housing are now called Eagle's Pointe. The correctional facility also was increasing its population to capacity. It soon became apparent to utilities staff that something may be wrong with the wastewater treatment process. The facility began having issues with compliance and suffered from a variety of effluent violations. Efforts to operate the facility and maintain compliance were extremely difficult.

The State of Indiana issued letters of violation for the effluent violations. Peru Utilities then decided to have a study conducted to determine if the facility could operate according to the present design. ATS engineering performed a comprehensive analysis of the plant and determined that the facility was unable to meet current regulatory requirements. The decision was made to pursue an upgrade.

The Utilities contacted the State Revolving Fund and secured financing for the improvements needed to build a new facility, using some of the existing infrastructure. The design for the new facility was the concept of Crawford, Murphy and Tilly (CMT) engineers. The project was approved by the SRF and qualified for partial funding through the American Recovery and Reinvestment Act (ARRA).



The new facility was successfully built by Shook Construction and was completed in 2011. The facility can handle 2.5 million gallons per day dry weather flow and 8.0 million gallons per day wet weather flow and is equipped as follows:

- Influent Screening
- Grit Removal
- Influent pump station
- 6 Vertical Loop reactors
- 2 circular clarifiers
- UV disinfection
- Effluent cascades
- Aerobic digesters, converted from anaerobic

- Drying beds with geo tubes
- 2 sludge equalization tanks



Pretreatment Screen



Vertical Loop Reactors



Clarifier



Effluent Cascade

The new facility is a radical change in technology from the previous plant and can perform extremely well under high organic and higher hydraulic loading conditions. The facility has been operated since its completion in a variety of conditions and has performed very well. As businesses and industries look at the former base for development the wastewater facility will support their needs.