



USACE, MOBILE DISTRICT

TEL IV WASTEWATER SYSTEM REPLACEMENT DESIGN/BUILD

Kennedy Space Center, Florida

PROJECT HIGHLIGHTS

CLIENT PROFILE

The U.S. Army Corps of Engineers (USACE) Mobile District manages of variety of programs in Alabama, Georgia, Florida, Mississippi, and Tennessee as well as Central and South America. The District's mission includes supporting all branches of the U.S. military, other federal agencies such as the U.S. EPA, and providing design and construction for civil works projects. Cape Canaveral Air Force Station (CCAFS) is an installation of the U.S. Air Force Space Command 45th Space Wing, which is headquartered at Patrick Air Force Base (PAFB) in Brevard County. CCAFS is the primary launch facility for the Command's Eastern Range and has supported America's space program since the 1950s.

PROJECT OVERVIEW

The firm replaced the existing sewage system treatment plant at the District's Telemetry IV (TEL IV) facility located at Kennedy Space Center (KSC). This facility is managed and operated by the 45th Space Wing. The project included post-design modifications, permitting, installation of wastewater system components and controls, force main and drain field construction, and roadway construction. The firm self-performed all aspects of the project.

CHALLENGES

- Design discrepancies with existing site conditions.
- Security access limitations.
- Limited on-site area for construction staging and operations.

THE MSE GROUP APPROACH

This assignment consisted of various technical tasks conducted in parallel to meet the project objectives:

- **Regulatory support and permitting:** Required extensive Air Force and KSC permit applicability review. Completed construction permitting and planning including preparation of NPDES construction permit, stormwater pollution prevention plan (SWPPP), County Department of Health treatment and disposal construction permit, Department of Health engineer certification, KSC excavation permit, and KSC Fire Department burn permit.
- **Post-design:** Identified discrepancies with specified equipment and potential seasonal high-water table conditions, and worked with the design team to modify design constraints and specific equipment to produce a functional system.
- **Construction:** Prepared phased construction plan and schedule to account for site access limitations and schedule conflicts to support launch operations; completed demolition of three aboveground wastewater tanks; constructed two elevated percolation ponds; and developed the effluent distribution system including force main and upgraded lift station (6,000-gallon capacity).

ACCOMPLISHMENTS

- Turnkey ability reduced project costs to 20% below engineering estimate.
- Integrated design and construction teams resulted in project completion over 2 weeks ahead of schedule.

AREAS OF EXPERTISE

- Planning and permitting
- Design/build

"The Air Force is very pleased with the work on the septic drain field installation. We are all fortunate to have 3E (now MSE Group) as a USACE approved contractor."

– U.S. Air Force



The project team self-performed all system component installations.