

Kiefer Landfill Design and Construction Support Services

Sloughhouse, California

CLIENT

Sacramento County
Department of Waste
Management & Recycling

HIGHLIGHTS

- Lateral expansion design and bid package development
- Design and construction support for several projects and phases
- Construction quality assurance
- Using soil from an excavation on one phase as final cover for partial final closure on another phase

GLA has provided engineering and construction support services to the Sacramento County Department of Waste Management & Recycling (DWMR) for several projects at the active Kiefer Landfill.

Module 5, Phase 1

We are currently working on the design of Module 5, Phase 1.

Module 4, Phase 2 Base Liner System

Expansion and Module 1, Phases 4 & 5 Partial Final Closure

GLA completed a construction package for the Module 4, Phase 2 Base Liner System Expansion and the Module 1, Phases 4 & 5 Partial Final Closure. This combined project included a 26-acre cell expansion and 46-acre partial final closure and involved excavating and stockpiling of soils, waste excavation, ripping and recompacting of the existing intermediate cover, geosynthetics installation, construction of the leachate collection and removal system (LCRS) gravel and piping, stormwater components, and landfill gas system management.

A unique feature of the project involved eliminating double handling of the soil; using the soil from the Module 4, Phase 2 excavation and segregation of 1.5 million cubic yards of material and placing 500,000 cubic yards as final cover for Module 1, Phases 4 & 5 Partial Final Closure. GLA provided construction quality assurance (CQA) for the construction of this project.

Module 4, Phase 1 Expansion

Prior to the project above, GLA provided design and construction support for the Module 4, Phase 1 expansion. This module covers an area of about 32 acres and includes base and side slope liner systems and primary and secondary leachate collection sumps. All three sumps included automated pumping systems with control panels. A vadose zone monitoring system is also included at the base of the module. GLA completed interim slope stability analysis, leachate collection and removal system design, and stormwater design in support of the Design Report and construction documents. A critical aspect of the project was the excavation, segregation, and stockpiling of 3.5 million cubic yards of material.

In addition to simply finding a place to stockpile this quantity of material on-site, the soil needed to be evaluated and segregated into suitable (for final cover), sand, and unsuitable



GLA has provided engineering and construction support services for several projects at the Kiefer Landfill.

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stockpiles. GLA worked closely with DWMR and the Sacramento County, Construction Management and Inspection (CMID) during the construction, assisting with critical issues and providing insight on the selected construction contractor.

GLA provided full-time CQA services during the Module 4, Phase 1 expansion's one-year and three-month construction project and prepared the final CQA Report, which was approved by the Central Valley Regional Water Quality Control Board (RWQCB). GLA worked closely with DWMR and CMID during the construction, assisting with critical issues and provided insight as to the selected construction contractor. GLA also provided leak location during construction on an as-needed basis to adapt the liner installation schedule and allowing construction activities to continue.

Module M1L-M3 Liner Infill Design and CQA

The M1L – M3 Infill was originally intended to be lined as part of the initial Module 3 construction. However, due to existing stormwater infrastructure in the area, it could not be completed. This project encompassed reconfiguring the stormwater collections features and complete the tie-in of Module 3 to Module 1.