

# Thanabalasingam Sathees, PE, QSP, QSD

## Project Engineer



### Education

- M.S., Civil Engineering, New Mexico State University, 2005
- B.S., Civil Engineering, University of Peradeniya, Sri Lanka, 2001

### Registration and Certification

- Registered Civil Engineer, California, 2009, #74228
- Certified Nuclear Gauge Operator
- 40-Hour OSHA Trained, 29 CFR 1910.120(e)(2)/8 CCR 5192
- GSI Certified CCL and Geosynthetics CQA Inspector
- Certified QSP/QSD

### Experience

8 years

### With AES

7 years

Mr. Sathees has 8 years experience in geotechnical investigations, design and CQA services for earthworks and geosynthetics for landfill expansions and final closures. He coordinated the laboratory test program, installed inclinometers and piezometers, instrumented, monitored and interpreted landslide movements, and performed slope stability analyses at the Frank R. Bowerman Landfill. He performed UNSAT-H analyses and evapotranspirative cover designs for the Puente Hills, Mesquite and Calabajas landfills. He served as a Field Engineer for construction of clay liner test pads, lime stabilization, soil cement stabilization, foundations and pile driving at LA County sanitation Districts Westlake Farms Bio-composting facility. He served as QA/QC Engineer / Monitor for construction of low permeability liners, final covers and geosynthetics at FRB landfill Phase VIIA/VIIB, Puente Hills Landfill Phase 6 Liner project and Mesquite Regional Landfill Cell 1 Liner project. He handles the project data management for as-built records for the landfill composite liners and has advanced knowledge of computer software for advanced geotechnical applications. Sathees is a GSI-certified CQA Inspector for geosynthetics and CCLs and is also QSP/QSD certified.

His relevant experience includes:

- **Frank R. Bowerman Landfill, Orange County, California**  
*Project Engineer* during geotechnical investigation of East Flank landslide mitigation involving complex and large scale stability analyses and design of stabilization measures using Slope/W including headscarp excavation, tieback anchors and buttresses. Also worked on coordinating laboratory test assignments of rock coring and drilling samples, interpretation of soil strength parameters based on large scale laboratory testing program, monitoring and interpretation of slope inclinometers and Time Domain Reflectometers, groundwater monitoring, and report production.
- **OC Waste & Recycling Central Region Landfills, Orange County, California**  
*Project Engineer* during 3-year on-call multi discipline services project for the Frank R. Bowerman and other Central Region landfills including slope stability evaluations, design of stabilization measures, laboratory test assignments, review strength parameters. Assisted with phasing plans and preparation of plans and specifications.
- **Puente Hills Landfill, Los Angeles County, California**  
*Project Engineer* for cover characterization study for existing side slope cover and future final cover construction at Puente Hills Landfill including subsurface investigation, coordinating laboratory testing, characterization of stock pile material, characterization of existing final cover, unsaturated flow modeling of final cover using UNSAT-H and development of CQA protocols and implementation plan.

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*Field Engineer* during CQA services for on-going final cover construction including field density testing, field sampling, site support and as-built report production.

*CQA Monitor and Field Clerk* for Phase 6 Composite Liner construction responsible for earthworks testing, subgrade preparation and data management for earthworks and geosynthetics.

- **Mesquite Regional Landfill, Imperial County, California**

*Geotechnical Design Engineer* for the final cover evaluation and Technical Design Report project involving characterization of existing stockpile source for final cover material. Performed unsaturated flow modeling with UNSAT-H for evapotranspirative cover design, assisted in LCRS design and assisted in preparation of the TDR.

*CQA Monitor* during Cell 1 Composite Liner project involving 2 million sq. ft. of geosynthetics and about 200,000 cu. yds. of earthwork.

- **Operating Industries, Inc. (OII) Landfill, Monterey Park, California**

*Project Engineer* during final cover construction and proposed commercial development at this super fund site. Performed cover percolation modeling using UNSAT-H for design of alternative cover. Performed engineering analysis to evaluate the settlement of refuse under proposed grading for a commercial development.

*CQA Monitor* for borrow soil import to the landfill final cover system.

- **San Timoteo Sanitary Landfill, San Bernardino County, California**

Prepared cover percolation analysis using UNSAT-H and alternative evapotranspirative cover design for the Preliminary Closure Plan.

*As Project Engineer*, performed slope stability analyses and design stabilization measures for refuse slopes of Unit 2, Phase 3 expansion. Percolation modeling of proposed landfill liner system using HELP.

*CQA Monitor* during CM/CQA services for Unit 2, Phase 3 expansion involving 6,000 cu. yds. of clay liner, 400,000 cu. yds. of engineered fill and over 1.5 million sq. ft. of geosynthetics installation including HDPE geomembrane, GCL, geotextile and protective membrane.

- **Kaiser East Slag Pile Landfill, Fontana, California**

*As Project Engineer*, performed hydrologic modeling of alternative cover performance using UNSAT-H for the final closure of the 36-acre East Slag Pile Landfill area, a part of the former Kaiser Steel Mill property in the City of Fontana.

- **Marine Corps Logistics Base Landfill, Barstow, California**

*As Project Engineer*, performed UNSAT-H analyses for evaluation of the performance of two closed landfills at Marine Corps Logistics Base in Barstow.

- **Westlake Farms Composting Facility, Kettleman City, California**

*As Project Engineer*, performed field data interpretation and settlement analysis during Phase 1 construction. Designed slabs-on-ground foundations for proposed structures based on Post Tensioning Institute Method (PTI) on highly expansive soil.

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*CQA Monitor* during Preliminary Site Improvements, including CQA services for the lime treated soil and lime-cement treated soil at the proposed composting facility, clay liners and geosynthetic liners for storm water ponds at the facility including LLDPE liner and geotextile for the proposed composting facility. Involved in field permeability testing, field compaction control, field density testing, field sampling and lime spread rate monitoring. Compiled construction and quality control data for soils and geosynthetics and as-built report production.

- **Ocean Outfall, Los Angeles County, California**

Involved in data collection afford for geotechnical data report (GDR) and geotechnical interpretation report (GIR) which included collection of past geotechnical reports, boring logs, laboratory test data, water well logs and oil well logs from available sources.

- **Lamb Canyon Landfill, Riverside County, California**

*CQA Monitor* during construction of the composite liner system for the 26-acre Phase 2, Stage 3 expansion of the landfill involving over 5 million sq. ft. of geosynthetics including HDPE membrane, GCL and geotextile.

- **Santa Maria Regional Landfill, Santa Maria, California**

Performed slope stability analysis using Slope/W to estimate the setback distance for trucks with loads at slopes for a minimum factor of safety of 1.25; Assisted in preparing geotechnical report.

- **Long Beach Water Department (LBWD), Long Beach, California**

Under as-needed geotechnical engineering services contract, worked on geotechnical investigation of a proposed Valve Upgrade at the LBWD Wastewater Treatment Plant involving geotechnical recommendations for shallow foundation design, temporary excavation and backfill, soil strength parameters, and stability issues.

- **Whispering Hills Residential Community Development, San Juan Capistrano, California**

Involved in geotechnical investigation for a large scale residential development on active landslide area. Performed complex and large scale slope stability analyses and design stabilization measures using Slope/W including tieback anchors, soil nail walls and buttresses. Prepared cross sections for stability analyses. CQA monitoring during butress excavation, and ground anchors installations.

- **Biarritz on the Park Multi-Story Residential Development, San Diego, California**

*CQA Monitor* during construction of a multi-story residential building with three levels of underground parking structures involving monitoring of installation of soil nails and tieback anchors, and as-built report production.

- **State Route 125, San Diego, California**

*As Project Engineer*, helped prepare cross sections, performed slope stability analyses and provided office services.