



ACLCA NSW Half-day Soil Logging Workshop 8 June 2018 - 9.00 am - 1.00pm

Course Presenter: Nik Kontos is a consultant environmental hydrogeologist at EI Australia. An Applied Geology graduate of RMIT, with post grad studies at Unis of New England and NSW, Nik has over 30 years of experience in groundwater supply development, groundwater resource management and contaminated land management in Australia, Southeast Asia and the Middle-East.

Nik has worked for the private sector and for regulatory authorities (including the NSW EPA Contaminated Sites Unit) and various Ministries of Water Resources in Australia and overseas. He has designed and supervised the drilling and testing of groundwater exploration bores, town groundwater supply wells, soil contamination investigation bores and environmental monitoring wells for groundwater contamination and soil vapour investigations.

Training Synopsis: This half-day workshop aims to strengthen the skills of engineers, scientists and geo-technicians working in contaminated land management, in soil logging and the field-based classification soils in accordance with the revised Australian Standard AS1726:2017 Geotechnical site investigations.

The course will be presented over 4 hours and will include: a picture-rich training presentation, with visual/tactile demonstrations on physical assessment of soil properties and the technical aspects of AS1726. The topics address in the presentation will include, but will not be limited to:

- Purpose & benefits of accurate soil logging
- The ASC NEPM field checklist
- Pre-field appreciation of site geology
- Unified Soil Classification System vs AS1726
- Soil description order
- Soil classification using field techniques
- Is it FILL or Natural soil?
- Classification of coarse-grained soils by grading
- Classification of fine-grained soils by plasticity
- Visual determination of Major soil type
- Example logs
- Visual estimation of constituent proportions
- Soil classification Groups and Symbols
- Particle characteristics of coarse-grained soils
- Field Tools for estimating grain size, grading, abundance
- Soil texturing to estimate sand, silt and clay content
- Describing soil colour
- Abundance terminology for secondary soil constituents
- Soil moisture, consistency and structure
- Defects, cementation and brief guide to rock logging
- Techniques for identifying material causing drill bit refusal
- Common mistakes to avoid in CLM logging

The presentation will be followed by a hands-on practical session where course participants will work in small groups to apply the theory and log real soil samples for three bores typical of sites in three, distinct, Sydney-based geological conditions, under Nik's guidance and instruction. Upon completion of the practical logging exercise, trainees' logs will be discussed with reference to the training presentation.

Course Materials: Trainees will be issued with a colour booklet of the training presentation; example logs; and a laminated, ACLCA-endorsed, soil logging reference sheet for field use.

Who is this Course for? This course is aimed at educating CLM practitioners and environmental professionals who may not have extensive geological training. It is particularly relevant to soil scientists, environmental scientists, earth scientists, engineering geologists and geological engineers, chemists, field geo-technicians and other professionals that have to describe soils and prepare test pit or borehole logs, and/or interpret soil logs as part of their day-to-day professional work.

The course content assumes each participant has a basic understanding of logging and is likely to be most relevant to professionals just starting their careers through to senior level practitioners wanting to brush up on their knowledge of AS1726:2017 and how it should be applied on CLM projects.