

8ICEG Keynote lecture



Dr. Ning-Wu Chang

Senior Hazardous Substances Engineer
Department of Toxic Substances Control, California
Environmental Protection Agency

Keynote lecture Title

Brownfield Redevelopment at Contaminated Landfill Site
[10:25 - 11:05 , Monday 29th Oct. 2018]

Biography

Dr. Chang earned his master and doctor degrees in environmental engineering from University of North Carolina at Chapel Hill. He is currently working for the Department of Toxic Substances Control, California Environmental Protection Agency. He is involved in soil and groundwater remedial investigation, feasibility study, and remedial design, as well as hazardous waste facility permitting. He has served as technical lead of brownfield site redevelopment and California superfund site projects. Prior to working with the State, Dr. Chang worked for environmental engineering consulting companies for more than 15 years. Dr. Chang has extensive experiences in evaluation and design of municipal and industrial water and wastewater treatment systems, soil and groundwater remediation, landfill leachate treatment system evaluation and design, and waste minimization. He also participated in Interstate Technology Regulatory Council (ITRC) as a team leader in developing several guidance documents. He is a licensed civil engineer in California, and a member of the Southern California Chinese Environmental Protection Association and the Overseas Chinese Environmental Engineers and Scientists Association.

Abstract

The legacy landfill sites are old landfills that have been ceased operations but have received mixed solid waste that may contain municipal waste, commercial solid waste, industrial solid waste, or waste material that is included within the definition of hazardous waste. Due to lack of proper controls, these legacy landfill sites usually caused environmental impacts. Yet, these contaminated landfill sites have been selected for brownfield redevelopment due to their locations and property sizes. To facilitate the redevelopment, the remediation of these contaminated landfill site has to be designed and integrated with the site redevelopment to avoid conflict between the remedial system and the redevelopment site features. The typical presumptive remedy for landfill involves a containment approach, including landfill cover, gas collection

and treatment, leachate/groundwater mitigation system. In addition, due to waste remains on-site, future operation and maintenance of the remedial system will be required. The requirement of this presumptive remedy must be maintained for protectiveness for future uses, yet the remediation system has to accommodate and be integrated with developer needs to have a usable and attractive development. A proactive approach to have both development and remediation teams to understand how redevelopment design and construction can accommodate the remediation system is critical in order to maintain protectiveness for future use of the site.