

NAIMA RAHMAN, Ph.D., E.I.T.
Staff Professional



Education

Ph.D. – Civil Engineering, University of Texas at Arlington, 2018
MUP – Urban and Regional Planning, Bangladesh University of Engineering and Technology, 2014
BA – Urban and Regional Planning, Bangladesh University of Engineering and Technology, 2011

Professional Licenses

Engineer in Training (EIT) No. 63253, Texas (2018)

Professional Affiliations

Member, Solid Waste Association of North America (SWANA)
Associate Member, American Society of Civil Engineers (ASCE)

Professional Experience

Dr. Rahman is experienced in the waste management engineering and consulting field. Her projects range from regulatory permitting and design of landfills, landfill gas (LFG) collection and control systems, leachate collection and control systems, and landfill liner and final cover systems in Texas, Alabama, Oklahoma, New Mexico, Colorado and Louisiana.

Before joining SCS Engineers, Dr. Rahman worked for the University of Texas at Arlington as a Graduate Research and Teaching Assistant during her Ph.D. study with a focus on municipal solid waste landfills. In this role, she had direct research experience with City of Denton, City of Irving, and City of Corpus Christi Landfills in Texas, USA.

The following are representative projects in which Dr. Rahman has participated at SCS Engineers:

Solid Waste Facility Design and Permitting

Dr. Rahman worked on permitting and design of a new landfill for the City of Waco. This included the development of various permit design plans, site operating plan, and related permit documents. She also worked on several permit modification and permit renewal projects for other landfills in Texas, as well as landfills in other states.

Landfill Liners, Final Cover and Drainage Construction Plan

Contributed to the liner construction plans for several landfills in Texas, Alabama, Oklahoma and Colorado. She assisted in developing final cover construction plans for landfills in Texas as well as drainage design for landfills such as detention basin, pond and channel etc.

Landfill Entrance Facility, Track-out Facility Construction Plans

Assisted in developing construction plan for entrance facility, track-out facility for landfills in South and West Texas.

Gas Collection and Control System (GCCS) Designs

Assisted in preparation of construction plans and technical specifications for multiple GCCS in Texas, New Mexico, and Louisiana, These projects involved various aspects of GCCS systems including lateral and header pipe extensions and design and specifications for blower/flare facilities.

Construction Phase Services and/or Quality Assurance

Construction-phase services, including construction meeting, review of submittals, review of pay applications and verification of measurement and payment, and preparation of construction record report of cell construction, and GCCSs in several landfills.

Aerial Budget Model/Fiscal Planning Model/Airspace Analysis

Airspace calculations and volume analysis projects for several landfills, for both public sector and private sector clients such as GFL Environmental, Waste Connections, Republic Services etc.

Quarterly LFG Monitoring

Managing the monitoring data associated with the Quarterly LFG Monitoring of a landfill.

Technical Skills

Dr. Rahman is proficient in AutoCAD Civil 3D, ArcGIS 10, Gstabl, LandGEM, HELP, gINT, GeoStudio, Driven, PLAXIS 2D, Culvert Studio, Studio Express, Microsoft Office, Web development (HTML+CSS), Statistical Package for Social Survey (SPSS), GeoDa, SimaPro etc.

Reviewer

- Environment, Development and Sustainability (Springer)
- Journal of Bioterrorism and Biosafety (JBBS) (peer reviewed)
- International Journal of Disaster Risk Reduction (IJDRR) (Elsevier)
- Sustainable Cities and Society (SCS) (Elsevier)

Publications and Presentations

Alam, M.J.B., **Rahman, N.**, Seraj, F. and Hossain, M.S. (2021), Monitoring and Evaluation of Evapotranspiration of Water Balance Cover, International Foundations Congress and Equipment Expo, Dallas, Texas, Pages 169-178.

(DOI: <https://ascelibrary.org/doi/abs/10.1061/9780784483435.016>).

Alam, M.J.B., **Rahman, N.**, Bhandari, P. and Hossain, M.S. (2021), Behavior of Unsaturated Hydraulic Conductivity of Water Balance Cover Measured through Field Instrumentation, International Foundations Congress and Equipment Expo, Dallas, Texas, Pages 330-338.

(DOI: <https://ascelibrary.org/doi/abs/10.1061/9780784483428.034>).

Alam, M.J.B., Ahmed, A, Hossain, M.S. and **Rahman, N.** (2021), Estimation of percolation of water balance cover using field scale unsaturated soil parameter, 3rd Pan-American Conference on Unsaturated Soils, MATEC Web of Conferences 337, 04005 (2021).

(DOI: <https://doi.org/10.1051/matecconf/202133704005>).

Alam, M.J.B., Ahmed, A, Islam, M.A., **Rahman, N.** and Hossain, M.S. (2021), Field monitoring and model predicted water balance of monolithic cover, 3rd Pan-American Conference on Unsaturated Soils, MATEC Web of Conferences 337, 04005 (2021).

(DOI: <https://doi.org/10.1051/mateconf/202133704009>).

Alam, M.J.B., DeVries, B., **Rahman, N.** and Hossain, M.S. (2019), Field Hydrologic Performance of Water Balance Cover in North Texas, Eighth International Conference on Case Histories in Geotechnical Engineering, Geo-Congress 2019: Geoenvironmental Engineering and Sustainability, Pages 95-104.

(DOI: <https://ascelibrary.org/doi/abs/10.1061/9780784482148.010>)

Alam, M.J.B., Hossain, M.S., Sarkar, L. and **Rahman, N.**, (2019) Evaluation of Field Scale Unsaturated Soil Behavior of Landfill Cover through Geophysical Testing and Instrumentation, Eighth International Conference on Case Histories in Geotechnical Engineering, Geo-Congress 2019: Geoenvironmental Engineering and Sustainability, Pages 1-11.

(DOI: <https://ascelibrary.org/doi/10.1061/9780784482148.001>)

Rahman, N., Samir, S. and Hossain, M.S. (2016). Energy Generation Potential Using Biocell for Organic Waste Management. Conference presentation for ISWA World Congress, September 19-21, Novi Sad, Serbia.

Rahman, N., Ansary, M.A. and Islam, I. (2015). GIS based mapping of vulnerability to earthquake and fire hazard in Dhaka city, Bangladesh", International Journal of Disaster Risk Reduction, Vol. 13, Pages 291-300. (DOI: <http://dx.doi.org/10.1016/j.ijdr.2015.07.003>).

Rahman, N. and Hossain, M.S. (2015). Effect of Municipal Solid Waste Management on Health Hazard: A Review, Annual Celebration of Excellence by Students (ACES) symposium, University of Texas at Arlington.