

CURRICULUM VITAE (CV)



H. JAMES LAW, PE, BCEE, LEED AP (BD+C), SC, IWM

Education

M. Eng. - Geotechnical Engineering, University of Toronto, 1984

B.S. - Geotechnical Engineering, University of Toronto, 1983

Professional Licenses/Certification

Professional Engineer: Virginia, Maryland, North Carolina, Idaho, South Carolina

American Academy of Environmental Engineers (AAEE), BCEE

Green Building Certification Institute (GBCI), LEED AP BD+C

International Solid Waste Association (ISWA), IWM

Solid Waste Association of North America (SWANA), SC – SWANA Certified Manager
of Landfill Operations (MOLO) and Leachate Management & Bioreactor Landfills

SWANA North Carolina (NC) Chapter – Certified Landfill and Transfer Station
Operations Specialist

Professional Affiliations

American Society of Civil Engineers:

ASCE-NCS Past Director & Geotechnical Committee Chair

ISWA STC member & Chair of Working Group on Landfill (WGL) and Task Force for Closing
Dumpsites; ISWA Board Member

National Society of Professional Engineers, PENC Central Carolina Chapter member

SWANA LMTD member & Vice-Chair of Landfill Long-Term Management Committee; Leachate
Management Committee member; North Carolina Chapter - Technical & Policy Committee
member

United States Green Building Council (USGBC) NC Triangle Branch Leadership Group member
& Education & Program Committee member

Professional Experience

Mr. Law has over 34 years of engineering and management experience in: geotechnical engineering and subsurface soil investigation/exploration programs (including embankment and MSE Wall evaluation), solid waste management, landfill engineering and closure design, LFG blower and flare foundation design, geotechnical and geosynthetic/soil material testing and analysis, resident/construction engineering and construction quality assurance services, project scheduling and construction cost estimate, foundation bearing/settlement analysis and design, liquefaction analysis, static and seismic slope stability analyses using STABL program, seismic permanent displacement analysis, geosynthetic reinforced slope, embankment and pavement design, writing of geotechnical soil reports, and construction completion certification reports.

Mr. Law's solid waste management experience also includes landfill gas collection and utilization as alternate energy, LFG equipment procurement for overseas, material recovery facilities, solid waste transfer station facilities, aerobic bioreactor landfill remediation, bioreactor slope stability analysis, leachate recirculation evaluations in obtaining RD&D permit, and many other major permit amendments for alternate bottom liner (including final cover system) and leachate collection systems through performance equivalency demonstrations using HELP and MULTIMED modeling throughout US.

He served as a panel judge at the 2012 US EPA's Peer Review Panel Meeting for Grants: People, Prosperity, and the Planet - P3 – Phase II Competition in Washington D.C. for projects related to solid waste management, recycling and reused of materials, and the alternate renewable green energy sources. For the last five years since 2013, he served as a judge for the AAEEES Excellence in Environmental Engineering & Science Awards E3 Competition, for entries in Research, Planning, Design, and Operations/Management categories. Other paper/publication review experience includes publishing papers at national and international conferences, as well as serving as a paper reviewer for the Editorial Board of the International Solid Waste Association (ISWA) on regular basis.

Employment History

May 1985 to April 1987: *Dynamic Drilling Sdn. Bhd., Sarawak, Malaysia*
(Civil/Geotechnical engineering) - Geotechnical Engineer

I joined Dynamic Drilling as a geotechnical engineer after graduation. My work responsibility primarily involved in new highway and commercial building site/subsurface soil investigation as well as for several bridge abutment soil improvement projects. I managed up to four drill crews (about 30 people) performing soil boring and sampling in difficult and challenging sites and sometimes on high-flowing rivers deep in the Borneo jungle where access could only be either by boat or on foot through swamps.

July 1987 to February 1991: *CTI Consultant, Inc., Fairfax, Virginia, USA*
(Civil/Geotechnical/Environmental) - Geotechnical Engineer

After moving to the U.S., I joined CTI Consultant serving as a geotechnical engineer. My work was primarily providing subsurface soil investigation of new or old commercial and residential building sites, including writing geotechnical soil reports, foundation designs and recommendations. I also performed soil and concrete testing as well as structural steel inspection at various new commercial sites. I managed and maintained a drill crew that performed soil borings and installed groundwater

monitoring wells. At CTI, I also performed in-situ soil testing and sampling on soil liners at a waste landfill and at a power plant fly-ash waste disposal lagoon construction. I obtained my first Professional Engineer registration in the State of Virginia in January 1990.

***February 1991 to June 1996: SCS Engineers, Reston, Virginia, USA
(Solid Waste Management/Landfill Construction Quality Assurance (CQA) and Inspection) – Project Engineer to Senior Project Engineer***

I joined SCS as Project Engineer and my main responsibility was providing geotechnical expertise in soil/geosynthetic material evaluation and selection for landfill design and construction, working as construction/resident engineering and owner representative at Oaks Landfill construction in Montgomery County, Maryland. I implemented CQA program, supervised two to four soil and liner inspectors who worked under me. I conducted weekly progress meetings, provided construction contract administration, reviewed submittals, and negotiated change orders/approved contractor's payment requests. I also re-evaluated global slope stability analysis of the landfill sideslope due to changes in construction materials. Later in 1994 I was promoted to Senior Project Engineer with more project management duties. I evaluated many different alternate liner and leachate collection system configurations and compared their performance to that of the prescriptive U.S. Subtitle "D" liner system. This was a necessary step to obtain approval from the approving state regulatory agency.

***June 1996 to August 2004: SCS Engineers, Columbia, Maryland, USA
(Solid Waste Management Facilities/Landfill CQA) – Project Manager to Project Director***

In June 1996 I was relocated to a satellite office in Columbia, Maryland as the Office Manager overseeing daily operations of this office. I was soon promoted to Project Manager in 1997. Besides my administrative duties, I was also appointed to the position of the Group Leader of the Construction Quality Assurance (CQA) and Construction Engineering Group that managed all CQA related projects managed by our Mid-Atlantic Regional Office in Reston, Virginia. I managed a group of engineers and inspectors who performed daily CQA/resident engineering, landfill construction and closure oversight for our clients in the region. I also performed geotechnical engineering and landfill engineering for numerous landfill design, permitting, and closure projects company-wide. I interacted with the landfill owners, contractors, and the state regulators pertaining to construction and design issues and for approval of new landfill permit or permit amendments to operate waste management facilities.

In 1997 I was involved with a prototype landfill gas collection and recovery system design and installation in Taichung, Taiwan. It was a design-built contract and later I led a group of electrical engineer and flare technician to Taiwan for startup commissioning and operation training. In addition, I acted as a translator between our Chinese client, the Taiwan EPA and the design engineer team.

In 2000 I was promoted to Project Director in SCS. This role gave me the responsibility of directing projects as well as managing design and construction projects where I interacted directly with my clients and the regulators.

As the company-wide expert in geotechnical engineering, I dealt mostly with difficult sites having geotechnical related issues such as seismic stability, liquefaction potential, settlement analysis, liner

strain calculations, leachate flow capacity and storage tank requirements, project specifications and soil or geosynthetic material selections.

***August 2004 to Present): SCS Engineers, Raleigh, North Carolina, USA
(Solid Waste Management Facilities/Environmental Sustainability Practice) – Project Director***

In 2004 I was relocated to Raleigh, North Carolina to open up yet another satellite office. My responsibility as the Office Manager remains about the same as in the previous office in Maryland. However, I am focusing more on international projects. Recently in 2015, I conducted several landfill expansion feasibility studies and managed to design a large landfill expansion project in Buenos Aires, Argentina. This effort includes providing a preliminary design drawing set and a limited construction oversight and consulting services during the construction of new cells. The project is on-going. Also in 2017, I conducted similar landfill expansion engineering evaluation in San Diego, Chile.

My involvement with ISWA has been steadily increased over the years. In 2014, I was elected to the Vice-Chair of the WGL and in 2018 to the Chair of the WGL for a four-year term. In 2017 I was elected to the ISWA Board representing the Organisation Membership for a two-year term.

Language Skills

Fluent (both written and oral) in English and Chinese Mandarin (including speaking few dialects).

Presentations & Training Workshops (recent 7 years)

2019 Special Lecture at the Department of Civil Engineering, Indian Institute of Technology (IIT) Delhi, New Delhi, India, on “Rehabilitation of High Municipal Solid Waste Dumps.” May 28, 2019.

2019 ISWA-SWIS Winter School at UTA & City of Irving – Lecturer on geotechnical related topics on “Landfill Stability and Landfill Settlement Evaluation.” January 14-25, 2019.

2018 ISWA World Congress in Kuala Lumpur, Malaysia – Presenter in Curated Session “Presenting the ISWA Task Force on Close Dumpsites” and in Post-Congress Training Workshop “Managing Landfills and Dumpsites in Developing Countries.” October 22–25, 2018.

2018 ISWA-SWIS Winter School at UTA & City of Irving – Lecturer on geotechnical related topics on “Landfill Stability and Landfill Settlement Evaluation.” January 15-26, 2018.

2017 ISWA World Congress in Baltimore, USA – Presenter in Curated Sessions “Closing Open Dumps and Landfills” and “Evaluating the Impact on Waste Management Caused by the Changing Waste Stream Composition.” September 25 – 27, 2017.

2017 ISWA-SWIS Winter School at UTA & City of Denton – Lecturer on geotechnical related topics on “Landfill Stability and Landfill Settlement Evaluation.” January 16-27, 2017.

2016 ISWA World Congress in Novi Sad, Serbia – Presenter on “Expansion of an Active Landfill – a Case Study.” September 19 – 22, 2016.

2016 Global Waste Management Symposium sponsored by National Waste & Recycling Association and Environmental Research and Education Foundation, Palm Springs, CA – Presenter on “A Case Study of Drone Technology Application in Waste Management Facility.” February 1-3, 2016

2016 ISWA-SWIS Winter School at UTA & City of Denton – Lecturer on geotechnical related topics on “Landfill Stability and Landfill Settlement Evaluation.” January 18-29, 2016.

2015 ISWA World Congress in Antwerp, Belgium – Presenter on “Major Parameters that Affect Outcome of Landfill Slope Stability Modeling.” September 7 – 9, 2015.

2015 ISWA World Congress in Antwerp, Belgium – Panelist speaker on ISWA Working Group on Landfill Training Workshop Programme. September 7, 2015.

2015 SWANA Palooza in New Orleans, LA – Panelist speaker on ISWA Working Group on Landfill Training Workshop. March 16 – 19, 2015.

2014 ISWA World Congress in Sao Paulo, Brazil – Presenter on “Impact of Leachate Level above Liner System on Slope Stability during Landfill Operation.” September 8-11, 2014.

2014 Global Waste Management Symposium sponsored by National Waste & Recycling Association and Environmental Research and Education Foundation, Orlando, FL – Presenter on “Effects of Liquid Levels to Interim Slope Stability during Sustainable Landfill Practice.” June 22-25, 2014.

2013 ISWA World Congress in Vienna, Austria – Presenter on “Maximizing Landfill Capacity by Vertical Expansion – A Case Study for an Innovative Waste Management Solution.” October 7-9, 2013.

2013 Sardinia Symposium, Cagliari, Sardinia, Italy – Presenter on “Sanitary Landfill Mining – Operational Interim Slope Stability Aspects.” September 30 – October 4, 2013.

2012 Global Waste Management Symposium sponsored by National Solid Waste Management Association, Phoenix, AZ - Presenter on “Landfill Seismic Permanent Displacement Analysis: A California Case Study.” October 1 – 3, 2012.

2012 WasteCon Conference sponsored by SWANA, Washington, D.C. – Presenter on “Permanent Seismic Displacement Evaluation and Comparison of Methodologies.” August 13-16, 2012.

2012 ISWA World Congress in Florence, Italy – Presenter on “Dump Site Redevelopment and Reuse: Technical Issues and Case Studies.” September 17-19, 2012.

Publications

Law, H. James. “Closed Landfill End-Use and Redevelopment: Technical Considerations and Case Studies.” 2007 City of Beijing Solid Waste Facilities & Material Handling, Recycling and End-Use Conference Proceedings, Beijing, China, June 6. 2007.

Law, James. “HELP Model – Demonstrating the Potential Impacts of Leachate Migration from Open Dumps.” ISWA from Open Dumps to Sanitary Landfill Workshop, ISWA/WMRAS World Congress 2008, November 2008, Singapore.

Law, James. “Bioreactor Landfills: Geotechnical Aspects of Stability Evaluation.” ISWA Master Class on Sustainable Landfill Workshop, 2009 ISWA/APESB World Congress, October 2009, Lisbon, Portugal.

Hudgins, Mark, James Law, David Ross and Jun Su. “The ‘Sustainable Landfill’ Becomes a Reality.” Waste Management World Magazine, May-June 2010.

McCready, Ambrose and James Law. “Solving the Landfill Puzzle.” WasteCon 2010 Conference sponsored by SWANA, Boston, MA, August 15-17, 2010.

Law, James, Hudgins, Mark, Su, Jun, and Peterson, Eric. “Water Requirements in an Aerobic Bioreactor Landfill Environment.” Global Waste Management Symposium sponsored by National Solid Waste Management Association, San Antonio, TX, October 3-6, 2010.

Law, James, Peterson, Eric, and Hudgins, Mark. “Water Requirements Estimates for an Aerobic Bioreactor Landfill in China.” Proceedings Sardinia 2011, Thirteenth International Waste Management and Landfill Symposium, S. Margherita di Pula, Cagliari, Italy; 3 - 7 October, 2011.

Law, James, and Isenberg, Robert. “Evaluation of Slope Stability in Bioreactor Landfill Environment.” 2011 ISWA/KSWM World Congress, Daegu, South Korea, 17 - 20 October, 2011.

Law, James, and Ross, David. “Dump Site Redevelopment and Reuse: Technical Issues and Case Studies.” ISWA World Congress 2012, Florence, Italy, 17 – 19 September, 2012.

Law, James, Miller, Joseph, and McCready, Ambrose. “Permanent Seismic Displacement Evaluation and Comparison of Methodologies.” WasteCon 2012 Conference sponsored by SWANA, Washington, D.C., August 13-16, 2012.

Law, James, Miller, Joseph, and McCready, Ambrose. “Landfill Seismic Permanent Displacement Analysis: A California Case Study.” Global Waste Management Symposium sponsored by National Solid Waste Management Association, Phoenix, AZ, October 1 – 3, 2012.

Law, James. “Sanitary Landfill Mining – Operational Interim Slope Stability Aspects.” 2013 Sardinia Symposium, Cagliari, Sardinia, Italy, September 30 – October 4, 2013.

Law, James, Goudreau, Michael, Fawole, Adedeji, and Trivedi, Mehal. “Maximizing Landfill Capacity by Vertical Expansion – A Case Study for an Innovative Waste Management Solution.” 2013 ISWA World Congress, Vienna, Austria, 7 – 9 October, 2013.

Pantini, Sara, Law, James, Verginelli, Iason, and Lombardi, Francesco. “Predicting and Comparing Infiltration Rates through Various Landfill Cap Systems Using Water- Balance Models – A Case Study.” 2013 ISWA World Congress, Vienna, Austria, 7 – 9 October, 2013.

Law, James, Isenberg, Robert, and Reed, Jeffrey. “Effects of Liquid Levels to Interim Slope Stability during Sustainable Landfill Practice.” Global Waste Management Symposium sponsored by National Waste & Recycling Association and Environmental Research and Education Foundation, Orlando, FL, June 22-25, 2014.

Law, H. James. “Impact of Leachate Level above Liner System on Slope Stability during Landfill Operation.” 2014 ISWA World Congress, Sao Paulo, Brazil, 8 – 11 September, 2014.

Law, James. "Landfill Cover Veneer Stability: Key Considerations and Evaluations." 2014 SCS LF + SMM Technical Guru Meeting, Kansas City, MO, September 19 – 20, 2014.

Law, H. James. "Major Parameters that Affect Outcome of Landfill Slope Stability Modeling." ISWA World Congress 2015, Antwerp, Belgium. September 7 – 9, 2015.

Lucero, Osvaldo, Rey Nores, Maria Eugenia, Ezequiel Verdini, Law, H. James. "Use of Drones on Landfills." ISWA World Congress 2015, Antwerp, Belgium. September 7 – 9, 2015.

Reed, Jeffrey, Elizondo, Marcos, and Law, James. "Design and Operational Considerations for Managing E&P Oil Field Waste in Municipal Solid Waste Landfills." Global Waste Management Symposium sponsored by National Waste & Recycling Association and Environmental Research and Education Foundation, Palm Springs, CA, February 1-3, 2016.

Lucero, Osvaldo, Rey Nores, Maria Eugenia, Ezequiel Verdini, and Law, James. "A Case Study of Drone Technology Application in Waste Management Facility." Global Waste Management Symposium sponsored by National Waste & Recycling Association and Environmental Research and Education Foundation, Palm Springs, CA, February 1-3, 2016.

Law, H. James, Glenn, A., Rey Nores, M. E., and Lucero, O. "Expansion of an Active Landfill – a Case Study." ISWA World Congress 2016, Novi Sad, Serbia. September 19 – 22, 2016.

Law, H. James and Ross, David E. "International Solid Waste Association's "Closing Dumpsites" Initiative: Status of Progress." Waste Management & Research, Vol. 37 (6) 565-568, June 2019.