

TRAVIS TAN, M.A.Sc., P.Eng.

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SUMMARY OF QUALIFICATIONS

Registered professional engineer in Ontario and Alberta with proven ability in environmental risk assessment. Experienced in wastewater research and development; contributed to optimizing UV disinfection of secondary effluent. Established record in managing tight deadlines, solving technical challenges, ensuring cost-efficiency and leading a team with diverse responsibilities. Fluent in English and Chinese.

EDUCATION

Master of Applied Science, Chemical Engineering Jan 2005 – Mar 2007
University of Toronto

- University of Toronto Research Fellowship Award. GPA 4.0/4.0

Bachelor of Engineering (Hons), Environmental Engineering Jul 2000 – May 2004
National University of Singapore

- Prime Minister's Top Graduate Award. GPA 3.7/4.0

RELATED EXPERIENCE

Project Manager Aug 2008 – Present

Environmental Engineer-In-Training Jul 2007 – Aug 2008
Barenco Inc.

- Manage risk assessment projects on brownfield sites. Tasks include reviewing current and historical site operations, implementing detailed sampling programs, developing conceptual site models, corresponding with clients and contractors, managing schedule and controlling budget. Completed more than ten projects with budgets ranging from \$80,000 to \$300,000.
- Model fate and transport of contaminant using USEPA software – Johnson and Ettinger, Biochlor and Bioscreen – for Imperial Oil sites and risk assessment projects. Developed equations combining concepts of a plug-flow model, phase partitioning, Darcy's Law and biodegradation kinetics for calculating contaminant migration and attenuation.
- Lead brownfield assessment projects in Calgary and Edmonton requiring expertise in Alberta Tier 1 and 2 Remediation Guidelines. Examples of sites include a 900-acre industrial chemical plant with diverse operations. Liaised with Alberta Environment, client and client's legal team.
- Advise and present key information to attorneys on complex and extended environmental legal proceedings. Tasks include assistance in discovery; verbal consultations; and production of written reports, illustrations and materials for courtroom use.
- Initiated numerous efforts for cost-saving and streamlining of project execution, including the development of a system for processing and accurately analyzing large databases for risk assessment projects.
- Managed complex Phase I and II Environmental Assessment projects involving multiple operational sites across Canada. Projects completed under urgent client time constraints.

M.A.Sc. Research Student Jan 2005 – Mar 2007

University of Toronto in collaboration with Trojan Technologies

- Investigated the correlation between UV disinfection performance and wastewater floc size. Work included formulating hypotheses, designing and performing bench-scale experiments and interpreting results using statistical analyses and non-linear regression. Research

improved understanding of best practices to optimize UV disinfection with upstream processes.

- Developed and tested methodology for the on-line prediction of UV disinfection performance on secondary effluent. Efforts initiated to address the prevailing lack of a quick procedure for monitoring and detecting lapse in disinfection performance.
- Researched the cause of inferior UV disinfection performance on trickling filter effluent. Conclusion revised then-current opinion and facilitated process improvement.
- Initiated effort to examine the influence of wastewater operating parameters on UV disinfection performance using multivariate data analysis. Ph.D. research continues on this project at the University of Toronto.
- Presented at the Central Canadian Symposium on Water Quality and Ontario-Quebec Biotechnology Meeting to audiences of more than 100 research experts.

Design Engineer

Jan 2004 – May 2004

Undergraduate Plant Design Course

- Designed a wastewater treatment system for an integrated styrene manufacturing plant. System also included stormwater management and sludge processing.
- Evaluated the technical feasibilities, economic viabilities and the environmental impacts of designed alternatives, thus providing the basis for clients to make informed decisions.
- Sized the treatment units using SuperPro simulations to meet discharge criteria while providing sufficient treatment capacity.
- Prepared a 100-page report documenting decision rationale, system design, treatment performance and cost analysis.

ADDITIONAL EXPERIENCE

Lecturer

June 2004 – Dec 2004

Ngee Ann Polytechnic

- Taught Fluid Transport Mechanics at the Chemical Engineering faculty. Work included developing curriculum and conducting lectures, tutorials and laboratory experiments.
- Devoted significant out-of-class time to detailed marking of exams and tutoring, oriented towards improving students' comprehension.
- Handled disciplinary issues and provided mentorship to 80 students.

Environment, Health & Safety (EHS) Intern

Jan 2003 – Dec 2003

General Electric (GE)

- Developed reference materials on all 21 components of the GE Global Star EHS Program.
- Evaluated and adapted EHS best practices from other GE divisions to GE Plastics facilities.
- Assisted in auditing GE Plastics facilities for GE Global Star EHS compliance.
- Analyzed EHS statistics and prepared presentations for the regional EHS Director.

Tutor

Jan 2001 - Dec 2002

Rotary Club, Singapore

- Tutored young offenders in math and science on a weekly basis.
- Volunteered at the Leprosy Relief Association.
- Raised funds for the Singapore Anti-Tuberculosis Association.

PROFESSIONAL CERTIFICATION: Professional Engineer of Ontario; Association of Professional Engineers, Geologists, and Geophysicists of Alberta

INTERESTS AND ACTIVITIES: Piano, tennis, cooking and traveling.