

Principal, Acoustics Noise and Vibration



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WORK HISTORY

2010 –	Principal	Novus
Present		Environmental Inc
1996 –	Senior	RWDI AIR Inc.
2010	Consultant	
2003 –	Course	Conestoga College
Present	Instructor	

QUALIFICATIONS

- Registered Professional Engineer (Professional Engineers Ontario)
- Registered Professional Engineer (Association of Professional Engineers, Geologists, and Geophysicists of Alberta)
- MTO Registered Qualified Noise and Vibration Consultant
- Qualified Expert Witness in Noise for the Alberta Energy Regulator, National Energy Board, Ontario Municipal Board, Ontario Superior Court

EDUCATION

- Bachelor of Applied Science, Systems Design Engineering, University of Waterloo, 1995
- Noise Assessment in Land Use Planning Certificate, Ontario Ministry of the Environment, 1997
- Certificate in Noise Control for Buildings, Manufacturing Plants, Equipment and Products, Hoover and Keith Inc., 1999

MEMBERSHIPS

- Professional Engineers Ontario
- Ontario Society of Professional Engineers
- Association of Professional Engineers and Geoscientists of Alberta
- Canadian Acoustical Association
- Institute of Noise Control Engineering
- Acoustical Society of America

BIOGRAPHY

Mr. Penton has been active in the acoustics, noise and vibration field since years of experience in the fields of noise and vibration, air quality and pedestrian wind since 1995. He has an undergraduate degree in Systems Design Engineering from the University of Waterloo, and has published numerous papers on environmental noise impact assessment. He has worked on hundreds of environmental noise impact assessments, covering everything from new subdivisions to major power plants, for projects in Canada and around the world, and is a respected specialist providing expert testimony.

HEARING EXPERIENCE

- 21 Principal Road Proposed Waste Recycling Facility, Toronto, ON (Ontario Municipal Board File PL140034, PL140502)
- East Bayfront West Precinct Developments, Toronto, ON (Ontario Municipal Board File PL PL030412, PL030514)
- Proposed Kennel, Caledon, ON (Niagara Escarpment Commission File P/C/2013-2014/017)
- St. Vincent St. Townhouse Developments, Stratford (Ontario Municipal Board File PL131149)
- Capstone Power Goulais Wind Farm, Sault Ste.
 Marie, ON (Environmental Review Tribunal Case No. 12-0120)
- Vineland Power Wind Farm, Tweedside, ON (Environmental Review Tribunal Case Nos 13-0179, 13-0180)
- 17 Ewen Road Development, Hamilton, ON (Ontario Municipal Board File PL110331, PL120574)
- Eliopoulos Wedding Facility, King Township, ON (Ontario Municipal Board File PL130137)
- Bayou Wake Cable Park, Amaranth, ON (Ontario Municipal Board File PL120922)
- Amexon "Central Park" Development, Toronto, ON (Ontario Municipal Board File PL120752, PL120751)
- Picard Microbrewery, Norfolk County, ON (Ontario Municipal Board File PL110466)
- Amexon 60-80 Park Lawn Road Development, Toronto, ON (Ontario Municipal Board File PL050003)
- Paonessa v. City of Brampton Reference Plan 43R-32049 (Ontario Municipal Board File LC090021)



- 181 Nugget Ave. / Friends of Jesus Christ Church Re-zoning, Toronto, ON (Ontario Municipal Board File PL091072)
- Mackenzie Gas Pipeline Project, Northwest Territories (National Energy Board/ Joint Review Panel GH-1-2004)
- Shell Scotford Upgrader Expansion Project (Alta Energy Regulator 2006-085)
- Jilek v. Stiller Centre, London Ontario (Ontario Superior Court)
- Alma Crossings Development, Mapleton, ON (Ontario Municipal Board File PL030903)
- McCarthy Pit, Ramara, ON (Ontario Municipal Board File PL010055)
- Sumas Energy 2, Abbotsford, BC (National Energy Board File 2200-S040-1)

LAND USE PLANNING

- Prica Columbia & Albert Street Development, Waterloo, ON
- 21 Principal Road Waste Recycling Facility, Toronto, ON
- Daniels Corporation East Bayfront West Precinct Developments, Toronto, ON
- Tribute 71 Mutual Development, Toronto, ON
- Signature Berkeley & Parliament Development, Toronto, ON
- Auburn/Rise 17 Ewen Road Student Residence Development, Hamilton, ON
- Pier 27 Development peer review for City of Toronto, Toronto, ON
- Milton Heights Development peer review, for Town of Milton, ON
- Build Toronto 411 Victoria Development, Toronto,
- Build Toronto 28 Bathurst Street Development, Toronto, ON
- Signature Red Maple Development, Richmond Hill,
- FIMA North Queensway Development, Toronto,
- Pinnacle Mondiale 1 Yonge Street Development, Toronto, ON
- Amexon "Central Park" Development, Toronto, ON
- Picard Microbrewery, Norfolk County, ON
- Amexon 60-80 Park Lawn Road Development, Toronto, ON
- Build Toronto Corus Building, Toronto, ON

- Urbancorp 1100 King Street Development, Toronto,
- Canada Lands Corporation Block 28 Developments, Toronto, ON

MINING, PITS AND QUARRIES

- Amaranth Valley Grove Development peer review, Amaranth, ON
- Hidden Quarry peer review, Rockwood, ON
- Tech Resources Frontier Project peer review, Fort McMurray, AL
- Grizzly Oil Sands Thickwood Project peer review, Fort McMurray, AL
- Hunder Development Ltd. Hunsburger Pit peer review, Conestogo, ON
- BaffinLands Mary River Iron Ore Mine, Baffin Island, Nunavut
- Walker Bros Quarries, Niagara, ON
- St. Marys Flamborough Quarry haul route noise and vibration assessment, Flamborough, ON
- Miller Braeside Quarry Expansion peer review, McNabb/ Braeside Township, ON
- Greenock Quarry, Greenock Township, Bruce County, ON
- Everest Quarry, Amabel Township, Bruce County,
- Sutherland Artemesia Pit, Artemesia Township, Grey County, ON
- Preston Quarries Wolf Pit, Waterloo, ON

VIBRATION IMPACT ASSESSMENT

- Forensics Science and Coroner's Court Complex, Toronto, ON
- University of North Florida Sciences & Humanities Building, Jacksonville, FL, USA
- Nortel Networks Palladium Drive Building, Kanata,
- Emory University Whitehead Research Building, Atlanta, GA, USA
- Brigham and Womens Hospital proposed operating theatre, Boston, MA, USA
- University of Michigan Life Science Building, Ann Arbor, MI, USA
- Yale University School of Medicine Congress Avenue Building, New Haven, CT, USA



TRANSPORTATION SECTOR

- Ministry of Transportation Noise Reducing Asphalt Assessment, Highway 405, St. Catherines, ON
- "BoomCast" Sonic Boom Prediction Model development and field validation, CFB Goose Bay NL and CFB Cold Lake, AL
- Region of Waterloo / University of Waterloo Centre for Pavement and Transportation Technology – Quiet Pavement Technology Evaluation, Waterloo, Ontario.
- Highway 407 Eastern Extension Environmental Assessment, ON
- Transport Canada Surface Transportation Noise Guideline development, Ottawa, ON
- Union Station Revitaliation Project, Toronto, ON
- Airport Noise Modelling of the New Quito International Airport, Quito, Ecuador
- GO Transit Stouffville Corridor New Layover Facility, Stouffville, ON.
- GO Transit Snider Site Rail / Rail Grade Separation, Noise and Vibration Assessment, Vaughan, ON
- Ottawa Carleton Light Rail Transit Pilot Project, Ottawa, ON
- TTC Subway Emergency Ventilation Fans Upgrades, Toronto, ON
- Toronto City Centre Airport proposed fixed link, Toronto, ON
- Red Hill Creek Expressway, Hamilton, ON
- Seaway International Bridge North Channel Bridge Renovations Noise and Vibration Assessments, Cornwall, ON
- Peace Bridge Expansion Environmental Assessment, Buffalo, New York and Fort Erie, ON

ENERGY SECTOR

- Mackenzie Gas Pipeline Project, Northwest Territories
- Town of Oakville Official Plan Policy for Power Projects, Oakville, ON
- Sithe Energies Goreway and Southdown Stations Environmental Assessments, ON.
- Various Wind Farm Projects
 - o Capstone Power
 - o Capstone Power
 - o Capstone Power
 - Capstone Power
 - Capstone Power Goulais Wind Farm, Sault Ste. Marie. ON

- o Vineland Power Wind Farm, Tweedside, ON
- o Algonquin Power Red Lily Wind Farm, Moosomin, SK
- Algonquin Power Morriston Wind Farm, Moosomin, SK
- o Green Breeze Brooke-Alvinston Wind Farm Project, Waterford, ON
- Gilead Ostrander Point Wind Farm Project,
 Prince Edward County, ON,
- o Clearview Wind Farm Project, Stayner, ON
- Shell Scotford Upgrader Expansion, Fort Saskatchewan, AL
- Devon Canada Corporation Beaufort Sea Exploration Drilling Program, NT
- BA Energy Heartland Upgrader Project, Fort Saskatchewan, AL
- AEC Foster Creek SAGD EIA, Cold Lake, Al
- Devon Jackfish SAGD Project, Cold Lake, Al Canada
- Waste to Energy Incineration Facility site selection, Hong Kong SAR, PRC
- Wärtsilä Termoriente Power Plant, Shushifundi, Ecuador
- AES Haripur and Khulan Power Plants, Bangladesh
- Imperial Oil Limited Sarnia Division Cogeneration Plant, Sarnia, ON
- Wärtsilä Plains End Generation Plant, Denver, CO, USA

INDUSTRIAL CERTIFICATES OF APPROVAL / ACOUSTIC AUDITS

- DaimlerChrysler Windsor Assembly Plant acoustic assessment, Windsor, ON
- General Motors Oshawa Autoplex, St. Catherines Components Plant, St. Catherines Engine Plant, and Windsor Transmission Plant, ON
- Abitibi Consolidated Canada Inc. Kenora Division Boiler Retrofits, Kenora, ON
- Toronto Transit Commission Birchmount Garage, Toronto, ON

LANDFILLS AND RELATED INDUSTRIES

- 21 Principal Waste Recycling Facility, Toronto, ON
- Walker Bros. Landfill, Niagara, ON
- Browning Ferris Industries (BFI) Ridge Landfill expansion, Chatham, ON
- Trail Waste Facility Landfill site expansion, Ottawa, ON



- Guelph Eastview Landfill annual audits, Guelph,
- Hong Kong North West Waste Transfer Co. NWNT Refuse Transfer Station Environmental Statement, Hong Kong SAR, PRC

ARCHITECTURAL AND BUILDING **ACOUSTICS**

- Ontario Forensics Services and Coroner's Complex, Toronto, ON
- St Thomas Consolidated Courthouse, St. Thomas,
- Nelson Mandela Park Public School Renovations. Toronto, ON
- Gravenhurst YMCA and Community Centre Development, Gravenhurst, ON
- Jamaica Station New Main Portal, Queens, NY,
- Yale University School of Medicine Congress Avenue Building, New Haven, CT, USA
- U.S. Naval Sea Command (NAVSEA) Headquarters, Washington, DC, USA
- Brigham and Womens Hospital helicopter vibration, Boston, MA, USA

AIR QUALITY IMPACT ASSESSMENTS

- Mercury Emission Allocation and Modelling File Development, for Environment Canada
- Amundsen Scott South Pole Research Station Power Plant Expansion, Antarctica
- NIH Bayview Research Centre Design Guidelines, Baltimore, MD, USA
- Merck and Company West Point Building 45 Expansion, West Point, PA, USA
- Food and Drug Administration Laboratories Generator Sets, MD, USA
- Lehigh Valley Hospital Expansion, Allentown, PA, USA

PEDESTRIAN WINDS AND **MICROCLIMATE**

- Daniels Corporation East Bayfront West Precinct **Developments**
- PanAm/ Para PanAm Games Athlete's Village, Toronto, ON
- Pinnacle Mondiale 1 Yonge Street Development, Toronto, ON
- Pinnacle Mondiale 283 Adelaide Street Development, Toronto, ON

- Amexon "Central Park" Development, Toronto, ON
- Cityzen Developments 154 Front Street East project, Toronto, ON
- 240 Markland Road residential tower development, Toronto, ON
- 186 King Street Red Condo Development, Waterloo,
- Quinte Consolidated Courthouse Development, Belleville, ON
- 253 King Street North residential tower development, Waterloo, ON

SELECTED RELEVANT PUBLICATIONS AND PRESENTATIONS

- Qui, X. et al., (2010), Development of a High-Resolution Mercury Emission Inventory in Canada, poster presentation at the Community Modelling and Analysis System (CMAS) 2010 Conference, University of North Carolina at Chapel Hill
- Penton, S. et al., (2009), Airport Noise Modelling for the New Quito International Airport, presented at the Alberta Acoustical Society 2009 Spring Conference on Environmental and Occupational Noise.
- Penton, S. (2008, 2010) Low Noise Pavement Technologies in the Canadian Context – A Review of Recent Studies Conducted in Alberta and Ontario, Air and Waste Management Association (AWMA) Environmental Nuisances: Noise, Light, Odour, & Fugitive Dust Conference, Toronto (2008) and Calgary (2010)
- Penton, S, J.W. Bolton et al, (2007) BoomCast: Sonic Boom Noise Forecasting for Flight Planning and Wildlife Impact Reduction, presented at the Alberta Acoustical Society 2007 Spring Conference on Environmental and Occupational Noise.
- Leung, Y-T. F., S. Tighe, G. MacDonald and S. Penton (2006) Development of Tools to Evaluate Quiet Pavements in the Laboratory and Field, presented at the Annual Conference of the Transportation Association of Canada (TAC).
- Penton, S and C. Hubble, Noise and Odour Guidelines for Development, presented at the Law Society of Upper Canada "6-Minute Municipal Lawyer" Conference, 2006.
- Penton, S. and J. Wrobel, (2005) Uncertainty In Noise Analysis, presented at the Alberta Acoustical Society 2005 Spring Conference on Environmental and Occupational Noise.
- Penton, S., and J. Tsang, (2005) Environmental Considerations For Noise Barriers, presented at the Alberta Acoustical Society 2005 Spring Conference

- on Environmental and Occupational Noise, and published in Canadian Acoustics, Vol. 33 No. 4 (2005) pp.55-56.
- Penton, S., and Chin-Quee, D.A., (2002) Current
 Low Frequency Noise (LFN) Assessment Guidelines
 and Their Use in Environmental Noise Impact
 Assessment, presented at the Canadian Acoustical
 Association Annual Meeting, and published in
 Canadian Acoustics, Vol. 30 No. 3 (2002) pp.79-79.
- Chin-Quee, D.A., and Penton, S., (2004) A Review of Acoustical Design Standards in K-12 Schools, presented at the Canadian Acoustical Association Annual Meeting, and published in Canadian Acoustics, Vol. 32 No. 3 (2004) pp. 32-33.
- Chin-Quee, D.A., and Penton, S., (2004) *Design of a Classroom for Deaf / Hearing Impaired Student Educators*, presented at the Canadian Acoustical Association Annual Meeting, and published in Canadian Acoustics, Vol. 32 No. 3 (2004) pp. 36-37.
- Penton, S., and Chin-Quee, D.A., (2002) *Current Low Frequency Noise (LFN) Assessment Guidelines and Their Use in Environmental Noise Impact Assessment*, presented at the Canadian Acoustical Association Annual Meeting, and published in Canadian Acoustics, Vol. 30 No. 3 (2002) pp.79-79.
- Penton, S., et al., (2002) The Effect of Meteorology and Terrain on Noise Propagation Comparison of Five Modelling Methodologies, presented at the Canadian Acoustical Association Annual Meeting, and published in Canadian Acoustics, Vol. 30 No. 4 (2002) pp.30-33.