



Basel Ismaiel, MBA, EIT

Environmental Engineer

1. Biography

Basel managed tens of projects in greenhouse gas quantification & verification, air dispersion modeling, and water & soil quality and monitoring while consulting for various clients in oil & gas, waste management, aviation, power generation, and manufacturing sectors in North America. Basel is a Canadian citizen, and currently resides in Ottawa, Ontario.

2. Software

Ref#	Domain	Software
2.1	Air Dispersion	CALPUFF, AERMOD, AERSCREEN, ISC3
2.2	Meteorology	CALMET
2.3	GIS	ArcGIS, Surfer, Google Earth
2.4	GHG Inventory	EDMS, MOVES, RETSCREEN, MS Excel
2.5	Operating System	UNIX, DOS
2.6	Statistics	R, MS Excel
2.7	Project Management	SharePoint, Smartsheet

3. Employment Record

Ref#	Dates	Organization	Position	Location
3.1	2016-2017	Remote Energy Security Technologies Collaborative	Project Coordinator	Ottawa, Ontario, Canada
3.2	2015-2016	Eclipse Compliance	Environmental Consultant	Calgary, Alberta, Canada
3.3	2015	Gemini Corporation	Senior Environmental Advisor	Calgary, Alberta, Canada
3.4	2013-2014	RWDI Air Inc	Air Quality Engineer	Calgary, Alberta, Canada
3.5	2011-2012	Prasino Group	Project Coordinator	Calgary, Alberta, Canada
3.6	2010	Carleton University	Teaching Assistant	Ottawa, Ontario, Canada

4. Projects Description

Ref #	Dates	Client Organization & Location	Project Title & Role	Description/Details
4.1	2012-2015	Various private and public sector enterprises in oil & gas and aviation in North America and the Middle East, including, but not limited to, Kinder Morgan, NOVA Gas Transmission, Oshawa Airport, and Government of Dubai	Environmental Engineer – CALPUFF/AERMOD Air Dispersion Modeling and Emissions Mapping	The projects analyzed impact on air quality of facilities' and airplanes operations for regulatory approval purposes, and included collecting and analyzing plot plans, buildings dimensions, process schematics, operation logs, meteorology, geography, land use, and equipment specs sheets. Dispersion modeling tasks included preparing, running, and debugging modeling software, and making scientific judgements regarding inputs of chemical reactions, unit conversion, land use variables, and materiality of emissions from nearby facilities.
4.2	2011-2012	Various private sector enterprises in oil & gas, waste management, and manufacturing sectors in North America, including, but not limited to, Shell, ATCO, and Neucel Specialty Cellulose	Project Engineer – GHG Quantification, Verification and Reporting	The projects analyzed baseline greenhouse gas emissions resulting from facilities' operations, and calculating emissions salvaged and dollar credits from implementing projects' processes or technologies. Tasks included identifying and reviewing applicable directives, guidelines, permits, historical data reports, and operations data, and creating quantification Excel sheets and project term and final reports.
4.3	2012	Saskatchewan Ministry of Environment, Saskatchewan, Canada Shell Verified Carbon Standard, Alberta, Canada	Project Engineer – GHG Quantification Protocol Development for 1- Solar, Wind, and Low Retention Water-Powered Electricity Generation, 2- Sulphur Concrete in Precast Applications, and Substitution of Bitumen Binder in Hot Asphalt Production and Usage	The projects created new quantification standards for the purpose of project uptake by potential participants, and included authoring protocol applicability and flexibility scenarios, baseline and project process flow diagrams, baseline and project element life cycle charts, descriptions of sources and sinks, quantification approach, equation, variable, and unit tables, measurement methods, and data quality management. The development process included coordinating with and answering inquiries by 3 rd party auditors and public interest groups.
4.4	2016	Advantage Oil & Gas, Calgary, Alberta, Canada	Environmental Engineer – Groundwater and Soil Monitoring Plans	The project analyzed impact on soil and groundwater quality of facility's operations for regulatory approval purposes, and tasks included analyzing geography, lithology, land use, plot plan, operation logs, lab reports of

soil and water samples, and equipment specs sheets.

5. Projects List by Sector

Ref #	Sector	Projects
5.1	Oil & Gas	<ul style="list-style-type: none"> CALPUFF Air Dispersion Modeling and Quality Assurance. Kinder Morgan corp.: Trans Mountain Expansion (2014). Shell corp.: Carmon Creek (2014) AERMOD Air Dispersion Modeling and Quality Assurance. NOVA Gas Transmission corp.: Leismer Compressor Station (2014). Paramount corp.: Resthaven Gas Plant (2015). Encana corp.: Kaybob Phase 2 & 3 (2015). Advantage Oil & Gas corp.: Glacier Phase 7 (2015). Keyera Energy corp.: Wapiti Station (2015). Tourmaline Oil corp.: Spirit River Plant Phase 2 (2015). Journey Energy corp.: Genesee & Arvilla Plants (2015). Secure Energy corp.: Kindersley Gas Plat (2015) Gas Flaring, Incineration, and Venting modeling. Nexen corp.: Balzac (2014). Imperial corp.: Lone Pine Wells (2014). Penn West corp.: Saskatchewan Low Pressure Flare (2015). Journey Energy corp.: Genesee & Arvilla Plants (2015) GHG Verification and Reporting. Advantage Oil & Gas: Glacier Gas Plant (2014); ATCO: Alberta System (2014); Alliance: Pipeline (2013) GHG Quantification and Reporting under the Alberta Offset System. Shell: Large Stoichiometric Gas Engine (2012) Groundwater and Soil Monitoring Plans. Advantage Oil & Gas: Glacier Gas Plant (2015)
5.2	Power Generation & Transmission	<ul style="list-style-type: none"> Developed GHG emissions map from construction activities of a large nuclear power plant in the Middle East (2018) Developed the Quantification Protocol for Solar-, Wind- and Low Retention Water-Powered Electricity Generation: Saskatchewan Ministry of Environment (2012)
5.3	Aviation	<ul style="list-style-type: none"> AERMOD Air Dispersion Modeling and Emissions Inventory. Oshawa Airport: Environmental Study (2014) Developed the State Action Plan for Sustainable Aviation: Government of Dubai (2012)
5.4	Marine	<ul style="list-style-type: none"> Oil Skimmer Research, Development & Demonstration Project: Oil Spill Response Science – Natural Resources Canada (2017)
5.5	Manufacturing	<ul style="list-style-type: none"> GHG Quantification and Reporting for under the Alberta Offset System. Neucel corp.: Fuel Switch Project (2012) Developed the Quantification Methodology for the Use of Sulphur Concrete in Precast Applications for the Verified Carbon Standard (2012) Developed the Quantification Methodology for the Substitution of Bitumen Binder in Hot Asphalt Production and Usage for Verified Carbon Standard (2012)
5.6	Waste Management	<ul style="list-style-type: none"> GHG Quantification and Reporting for under the Alberta Offset System. SALT corp.: Landfill Bioreactor (2012). Desviar corp.: Organic, Inorganic & Specified Risk Material Waste Processing (2013)
5.7	Forestry	<ul style="list-style-type: none"> Emissions Inventory using IPCC 2006 Guidelines of Proposed Tree-Planting Program: Kinder Morgan corp. (2014) Emissions Inventory using IPCC 2006 Guidelines of Forest Land: Government of Dubai (2013)

6. Education

Ref#	Date of graduation	Degree	Discipline	Institution
6.1	2011	M.B.A.	International Business	Carleton University, Ontario, Canada
6.2	2009	B.Sc.	Electrical Engineering	American University of Sharjah, Sharjah, United Arab Emirates

7. Teaching Portfolio

Ref #	Dates	Client Organization & Location	Project Title & Role	Description/Details
7.1	2010	Sprott School of Business at Carleton University, Ottawa, Ontario, Canada	Teaching Assistant – Modeling Business Decisions MBA Course	<p>The course introduced some of the most important management science approaches in modeling systems for problem solving and decision-making, with emphasis on optimization models, data analysis, and multi-criteria analysis.</p> <p>Conducted independent tutorial sessions for 30 students outside regular classes, and graded project assignments.</p>

8. Editing Portfolio

Ref #	Dates	Client Organization & Location	Project Title & Role	Description/Details
8.1	2014-2016	iAffairsCanada, Ottawa, Ontario, Canada	Associate Editor – Environment	Write op-eds and reports on emerging environmental and international trade issues. [Artwork]

9. Memberships & Continued Education

- 9.1 Engineer-in-Training by the Association of Professional Engineers and Geoscientists of Alberta (APEGA). 2013
- 9.2 CALPUFF Introductory Modeling. Exponent Inc. 2013.
- 9.3 Environmental Management in the Construction Industry. ECO Canada. 2016.
- 9.4 Graduate University Teaching Skills certificate. Educational Development Centre, Carleton University. Ottawa, Ontario, Canada. 2010.

10. Authorizations

- 10.1 Security Clearance Status: Enhanced Reliability. Expiry date: 23 November 2026.
- 10.2 Ottawa Police Service Check: Service with the Vulnerable Sector: Clear. Granted on 12 January 2017.