



"UHA7"

LISA RAMSAY, Ph.D., M.Sc.

Air Quality Specialist, Environment & Energy



CAREER SUMMARY

After completing a PhD in the United Kingdom, Lisa worked at the University of KwaZulu-Natal as a researcher and lecturer of atmospheric sciences. She joined WSP as an Air Quality Specialist on a part time basis in July 2012.

EDUCATION

Doctorate, University of Cambridge, United Kingdom	2010
Master of Philosophy (First Class), University of Cambridge, United Kingdom	2006
Master of Science, University of KwaZulu-Natal, South Africa	2005
Bachelor of Science, Honours (Summa Cum Laude), University of Natal, South Africa	2003
Bachelor of Science (Summa Cum Laude), University of Natal, South Africa	2002

YEARS WITH THE FIRM

5

YEARS TOTAL

9

AREAS OF PRACTICE

Air Quality Impact Assessment

Atmospheric Emission Licensing

Odour Assessment

Health Impact Assessment

ADDITIONAL TRAINING

First Aid Level 1, The Emergency Network, Durban, South Africa	2017
Hazard Identification & Risk Assessment, Safety Risk Management (SRM), Durban, South Africa	2017
CALPUFF and AERMOD Air Dispersion Modelling, Lakes Environmental, Las Vegas, United States	2016

PROFESSIONAL MEMBERSHIPS

National Association for Clean Air	NACA
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PROFESSIONAL EXPERIENCE

- Interwaste Drakenstein Waste-to-Energy Project, Wellington, Western Cape, South Africa (2016): Environmental Health Specialist.
Environmental Health Impact Assessment (human, plant and animal health) for a proposed waste recovery, beneficiation and energy project comprising anaerobic digestion and direct combustion facilities. Potential health hazards associated with the proposed development included atmospheric emissions, water and soil contamination, biohazards and pests, as well as impacts on wellbeing, such as odour and noise. This study assessed likely health impacts from the proposed facility via multiple exposure pathways (including inhalation, dermal contact, and ingestion of locally produced crops and meat) using internationally recognised methodologies for establishing distribution, likelihood and significance of impact. Client: Resource Management Services (RMS).
- Bulk Terminal Iron Ore Staining Assessment, Saldanha, Western Cape, South Africa (2015): Air Quality Specialist.
Development of an emissions inventory for the iron ore bulk storage facility at Saldanha Bay. A Level 3 dispersion model (CALPUFF) was applied to calculate ambient concentrations of particulate matter and levels of dust fallout. The study included an assessment of the red staining of surfaces in the nearby suburbs of Vredenburg, Langebaan and Bluewater Bay. Client: Transnet Port Terminals.

- Stellenbosch Landfill Decommissioning and Rehabilitation, Stellenbosch, Western Cape, South Africa (2014): Air Quality Specialist.
Development of an emissions inventory for an existing landfill using United States Environmental Protection Agency AP42 emission factors. Emission inventories for three potential end use scenarios also were developed, including a gas-to-energy option. A Level 2 (AERMOD) dispersion model was applied to calculate ambient concentrations of key pollutants for a health impact assessment of nearby sensitive receptors under the various scenarios. Client: Aurecon South Africa.
- Odour Management Plan for Maggot Protein Production Facility, Philippi, Western Cape, South Africa (2014): Odour Specialist.
Odour assessment and development of an odour management plan for a nutrient recycling plant in the City of Cape Town. The site is to process organic waste, producing maggots for drying and milling as protein feedstock. A legal compliance assessment was conducted and Atmospheric Emissions Licence application compiled. Client: AgriProtein Technologies.
- Island View Storage Atmospheric Emission Licence, Durban, KwaZulu-Natal, South Africa (2013): Air Quality Specialist.
Compilation of an Atmospheric Emission Licence for the largest chemical storage facility in South Africa. The study required emission estimation for more than 300 tanks (loading and breathing losses) and for the loading areas (ship and road) using the United States Environmental Protection Agency's AP42 emission factors. A legal compliance assessment was conducted. Client: Island View Storage.
- Cleaner Fuels 2 Air Quality Assessment, Durban, KwaZulu-Natal, South Africa (2013): Air Quality Specialist.
Assessment of the air quality impacts associated with process changes required to meet revised fuel specifications. Emissions from onsite stacks and tanks were calculated using a mass balance approach and use of the United States Environmental Protection Agency's TANKS model respectively. Ambient concentrations of various pollutants were calculated using a Level 2 dispersion model (ADMS). Study results were presented at contentious community meetings in the South Durban Basin. Client: Shell and BP South Africa Petroleum Refineries (SAPREF).
- Siguiri Mine Air Quality Impact Assessment, Siguiri, Guinea (2012): Air Quality Specialist.
Development of an emissions inventory for mining processes and onsite electricity generation using United States Environmental Protection Agency AP42 and Australian National Pollution Inventory emission factors. A Level 2 dispersion model (ADMS) was used to calculate ambient concentrations of particulate matter and dust fallout in the region. A health impact and dust nuisance assessment was conducted for nearby sensitive receptors. Client: AngloGold Ashanti.

PUBLICATIONS AND PRESENTATIONS

Selected Publications

- Pillay, K. and Ramsay, L.F. "Restructuring the Reduced Emissions from Deforestation and Forest Degradation (REDD+) mechanism for a Post Kyoto Agreement." *American Journal of Climate Change* 4(1), 2015, pp. 69-76
- Padayachee, Y.; Proches, S. and Ramsay, L.F.. "Beetle assemblages of indigenous and alien decomposing fruit in subtropical Durban, South Africa." *Arthropod Plant Interactions* 8(2), 2014, pp. 135-142

- Ndebele-Murisa, M.R.; Hill T. and Ramsay, L.F. "Validity of downscaled climate models and the implications of possible future climate change for Lake Kariba's Kapenta fishery." *Environmental Development*, 5, 2013, pp. 109-130.
- Ramsay, L.F. and Naidoo, R. "Carbon footprints, industrial, transparency and community engagement in a South Durban neighbourhood." *South African Geographical Journal*, 94 (2), 2012, pp. 174-190.
- Ramsay, L.F. "Severe Weather Bill Warning." *The Mercury*, Editorial, 1 February 2012, pp. 6.
- Grenfell, S.E.; Ellery, W.N.; Grenfell, M.C.; Ramsay, L.F.; and Flugel, T.J. "Sedimentary facies and geomorphic evolution of a blocked-valley lake: Lake Futululu, Northern KwaZulu-Natal, South Africa." *Sedimentology*, 57, 2010, pp. 1159-1174.
- Ellery, W.; Grenfell, M.; Grenfell, S.; Kotze, D.; McCarthy, T.; Tooth, S.; Grundling, P.-L.; Beckedahl, H.; Le Maitre, D. and Ramsay, L.F. "Controls on the distribution and dynamics of wetlands in South Africa." *Wetland Management Series: WET-Origins*, 2008.
- Diab, R.D., Thompson, A.M., Mari, K., Ramsay, L.F. and Coetzee, G.J.R. "Tropospheric ozone climatology over Irene, Johannesburg from 1990 - 1994 and 1998 - 2001." *Journal of Geophysical Research*, 2004, pp. 109.

Peer Reviewed Conference Papers

- Manqele, N.M. and Ramsay, L.F. "Evaluating the contribution of exhaust gas emissions to air pollution and the urban carbon footprint: A case study of the Port of Durban." *National Association for Clean Air (NACA) Annual Conference*, Durban, 9 - 10 October 2014.
- Gumede, P. and Ramsay, L.F. "Community discernments of particulate matter emanating from a landfill site in Durban, KwaZulu-Natal," *16th International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA) Clean Air Congress*, Cape Town, 29 September - 4 October 2013.
- Simpson, A. and Ramsay, L.F. "Topographic control of wind field in the near-surface boundary layer." *16th International Union of Air Pollution Prevention and Environmental Protection Associations (IUAPPA) Clean Air Congress*, Cape Town, 29 September - 4 October 2013.
- Tularam, H. and Ramsay, L.F. "Air quality in the Durban South Basin linked to synoptic events for the year 2009." *National Association for Clean Air (NACA) Annual Conference*, East London, 12 - 14 October 2011.
- Ramsay, L.F. "Asthma in the township communities of South Durban." *Chronic Disease and African Communities: Research, Practice and Policy*, London School of Economics and Political Science, London, 23 - 24 June 2008.
- Ramsay, L.F. "Tropospheric ozone profiling for Irene, South Africa." *Global Change and Regional Sustainability in South Africa*, Kirstenbosch Gardens, 27 - 29 October 2003.

Selected Presentations

- Ramsay, L.F. "David vs Goliath: The social costs and scientific realities of MES non-compliance at Legacy Companion Animal Crematoria", *IAIAsa 2016 National Conference*, Port Elizabeth, 19 August 2017.
- Ramsay, L.F. "Atmospheric dispersion modelling in South Durban." *E02Heaven Conference*, Leuven, Belgium, 14 May 2013.
- Ramsay, L.F. "Strengthening of the work of the Weather Service through the South African Weather Service Amendment Bill, 2011." *Parliamentary Portfolio Committee*, South African Parliament, Cape Town, 25 January 2012.



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- Ramsay, L.F. "Climate change: risks and vulnerabilities in Africa." *Faith Leaders Conference on Climate Change*, Koinonia Centre, Durban, 20 - 24 September 2011.
- Ramsay, L.F. "Local Conceptualisations and articulations of environmental health: a South Durban case study.", *Emerging New Research on Geographies of Health and Impairment (ENRGHI) Conference*, University of St Andrews, Scotland, 10 - 11 June 2008.
- Ramsay, L.F. "Accepting' poor environmental health." *Royal Geographical Society Annual Conference*, University College London, London, 27 - 29 August 2008.