

## Curriculum Vitae – Gerrit Kornelius

*Gerrit Kornelius has forty years of experience in the chemical processing field, thirty-one of which are air pollution-related. Most recently, he has been involved in air quality management in a variety of industrial sectors. Prior to this, he was a corporate consultant in emissions management and greenhouse gas emissions in the petrochemical industry. This was preceded by operational experience as environmental manager for a major petrochemical manufacturing facility, including air quality monitoring and emission management, and lecturing and consulting in air pollution management.*

### GENDER AND LANGUAGE:

Male

Proficient in English, Afrikaans, Dutch; working knowledge of German

### CURRENT AFFILIATION

Director/Associate of Airshed Planning Professionals since Sept 2005

### QUALIFICATIONS AND TRAINING

#### Qualifications

PhD in the field of Particulate Air Pollution Control Technology at the University of Pretoria (2003)

MBA - University of Pretoria (1976)

(Focus: Energy use and air pollution implications thereof in the steel industry)

B Eng (Hons) (Chem)(*cum laude*) - University of the Pretoria (1972)

B Eng (Chem) – University of Pretoria (1971)

#### Training Courses Undertaken

1996	Accredited Inspection Authority (Asbestos) with the SA DME
1993	One –week ISC3 dispersion modeling course offered by Trinity Consultants
1983	South African Government Certificate of Competency (Works,Mechanical)

### CAREER HISTORY

Director/Associate, Airshed Planning Professionals (Pty) Ltd	Sept 2005 onwards
Corporate Air Quality and Greenhouse Gas Consultant, Sasol Ltd, Johannesburg	Nov 2003 –July 2005
Environmental Manager, Sasol Synfuels (Pty) Ltd, Secunda	Jan 1998 – Nov 2003
Senior Lecturer, Chemical Engineering, University of Pretoria	July 1981 - December 1997

Consultant and Director, Enpro (Pty) Ltd	July 1991 – Dec 1997
Environmental Engineer and Researcher, Iscor Ltd	Jan 1972 – June 1981

### Work History

**August 2005 to present** Associate, Airshed Planning Professionals (Pty) Ltd, Midrand

A consulting firm providing services in the Air Quality Management field to industry and national, provincial and local authorities. Work includes the preparation of emission inventories, dispersion modeling, impact assessment and mitigation planning in the mining, metallurgical and general industrial sectors. Work for the public sector includes drafting of regulations on emission limits.

Also part-time lecturer in Environmental Engineering Group, University of Pretoria. Responsible for an honours module in Air Quality and the supervision of research students. . Short course lectures are given at North-West University (Air quality law) and the University of the Witwatersrand (Air quality impact of mining) as well as on behalf of the National association for Clean Air (NACA)

**Nov 2003 to July 2005** Air Quality and Greenhouse gas strategy adviser, Sasol Ltd, Johannesburg.

Responsible for strategy and coordination of air quality matters and the coordination of greenhouse gas reduction and trading activities.

**Jan 1998 to Nov 2003** Area Leader Environment (Environmental Manager), Sasol Synfuels, Secunda, South Africa.

The company produces approximately 8 million tons per annum of synthetic liquid fuels and chemical feedstock from 42 million ton of bituminous coal. Accountable for the environmental function of the factory (approx 6000 employees) including monitoring of air and surface/ ground water quality (on-line monitoring of criteria air pollutants and stream conductivity, routine and non-routine analysis for inorganic and organic air and water pollutants through the works laboratory and consultants), all statutory environmental permits (Air Pollution Prevention Act, National Water Act, Environment Conservation Act), roll-out of ISO 14001 in approx 15 business units, waste/emission reduction and disposal strategy incl waste inventory and impact modelling, negotiation on the implementation of Environmental Management Co-operation Agreements, utilisation of secondary factory grounds and irrigated areas through game and cattle farming. Total budget approx R8,5 million per annum, staff of 10 engineers and technicians.

Indirect responsibilities included: Project manager for project on domestic smoke reduction in the neighbouring township of eMbalenhle (300 000 inhabitants, cost of R2,1 million over 5 years); responsible for co-operative research project with Eskom and UP into use of Doppler Acoustic radar to predict pollution dispersion over Eastern Highveld (R2,1 million over three years); co-

responsible for drawing up an emission strategy for the SA Refinery Managers' Environmental Forum; chairperson of the South African National Standards technical committee on SA ambient air quality standards leading to SANS 69 and SANS 1929.

**Jan 1991 to Jan 1998** Consultant and director, Enpro (Pty) Ltd, environmental advisors.

Carried out a large number of projects in the areas of stack emission measurement, dust and asbestos exposure for works personnel, dispersion modeling for air quality prediction, specialist air quality studies for EIA purposes, reduction of domestic smoke exposure, measurement and analysis of fall-out dust, air pollution prevention equipment trouble shooting.

**July 1981 to Jan 1998** Senior lecturer, Chemical Engineering Dept, University of Pretoria.

Responsible for various undergraduate subjects, mainly Thermodynamics and fourth year design. Introduced graduate lectures in Air Pollution and Air Pollution Engineering and in Environmental Management. Study leader for five Master students and a Ph D student. As consultant for the Laboratory for Advanced Engineering (the University-associated consultancy) was involved in a large number of collaborative research projects in the fields of life support systems for mining and military purposes, extraction and purification of materials for the electronics industry and the thermodynamics of power generation cycles.

**July 1973 to July 1981** Various production and project assignments at the Iscor steel works, Pretoria.

These included water treatment and air pollution control projects, as well as production responsibilities in the coke ovens, oxygen production, and gas distribution areas.

## **MEMBERSHIPS**

Registered Professional Engineer with the Engineering Council of South Africa (Reg. no 750413).

Fellow, South African Institution of Chemical Engineers (SAIChE).  
Committee member of the SAIChE Highveld branch 1999-2003

Council member, South African National Association for Clean Air (NACA) and Editor of the SA Clean Air Journal 1994-2002 and 2005 onwards. Awarded "Innovator's Award" by NACA in 2007

NACA President 2002-2004

## **PUBLICATIONS AND PRESENTATIONS**

Author or co-author of 13 refereed publications. A separate list of these, as well as publications in other journals and presentations at international and local conferences is available.