

Air Quality: Newspaper Articles

Important New Air Quality Standards Published

Press Release – January 2005

Two important standards for air quality (SANS 69 and SANS 1929), have recently been published. These are important news for all those concerned with air quality, as they are linked to the new Air Quality Bill, and could soon have legal status.

The standards are:

- SANS 69, *Framework for setting and implementing national ambient air quality standards*, and
- SANS 1929, *Ambient air quality –Limits for common pollutants*.

In essence, SANS 69 defines the basic principles of a strategy for ambient air quality management in South Africa. The aim of this strategy is to avoid, prevent or reduce harmful effects on human health and the environment as a whole, taking into account technical, economic, social, political and strategic considerations.

SANS 1929 gives limit values for common air pollutants, to ensure that the negative effects of such pollutants on human health is prevented or reduced, and is closely linked to SANS 69.

“The publication of these standards marks the beginning of a complex process whereby the whole focus of air quality management will change to that of managing ambient air quality” said Dr Gerrit Kornelius, Chairman of the technical committee responsible for the standard.

“The system of air quality objectives proposed for implementation in South Africa is modelled on the tiered or banded approach applied by the European Community. The exceeding of thresholds therefore does not result in litigation, as in the USA, but rather in the initiation of more intensive air quality management planning.

“The banded approach also encourages the management of air pollution down to the lowest levels that can be met cost-effectively while still being compatible with sustainable development objectives. This is instead of ensuring that pollution levels stay just below the thresholds permitted for the key atmospheric pollutants, namely:

- benzene
- carbon monoxide
- dust deposition
- lead
- nitrogen dioxide
- ozone
- particulate matter (PM10), and
- sulfur dioxide”, he concluded.

Another standard linked to air quality, albeit from an automotive regulatory perspective, is SANS 20049. This standard, an adoption of the United Nation's ECE R49, is concerned with the emissions of pollutants from different categories of motor vehicles, namely passenger vehicles, buses and minibuses, and LDVs and trucks.

For more information, please contact:

Technical information on SANS 69 and SANS 1929: Dr Gerrit Kornelius, by telephone ((011) 344 0141) or email (gerrit.kornelius@sasol.com) .

To purchase the standards: Standards Sales at the SABS, by telephone ((012) 428-6883), or email (sales@sabs.co.za)

South Africa: Cape Town Aims to Have the Cleanest Air in All of Africa

Business Day (Johannesburg)
Posted to the web April 13, 2006
Chris Van Gass, Cape Town

A comprehensive air quality management plan was launched yesterday with the aim of ridding Cape Town of its notorious "brown haze" and making it the city with the cleanest air in Africa.

Some of the objectives of the 11-point plan include improving air quality in all informal settlements in the city and targeting vehicle emissions, which make up about 60% of the brown haze phenomenon encountered over the Cape Peninsula at times.

Cape Town, which has been monitoring air quality since 1958, is at the forefront of combating air pollution.

The city has been proactive in starting its own air quality management system, which has been taken up in recent national air quality legislation.

Dr Ivan Bromfield, manager of specialised health services in the city, said the plan would use all the tools and methods available internationally to ensure a proper and specific integrated system.

Another objective was to specify the ambient air quality standards for Cape Town, which uses guidelines set by the World Health Organisation.

The city already has a pilot programme running in Khayelitsha to improve air quality there.

The lessons learned from the project would be used in other programmes in other areas, said Bromfield.

Other objectives include enforcing current and future legislation around air quality and compiling an emissions database to establish the sources of air pollution.

The database would be used to do modelling around the pollution problem and to provide information on which the authorities could take action, said Bromfield.

The vehicle emissions programme has identified a number of sites at which free emission testing can take place.

Although random roadside testing of diesel vehicles is carried out at these sites within the boundaries of the city, it has been established that many vehicles are not caught in the net as they do not operate on the routes where testing sites were located.

Bromfield said in future the city would also consider the effect of land use and transport planning where new industrial complexes were considered and new roads were built.

The city would also use the plan to determine the health effects of air quality to identify trends and remedies.

City air pollution over international limits

Published on the web by Cape Times on June 13, 2003

Air pollution exceeded international guidelines for air quality at a number of the city's 12 monitoring stations this week.

On Wednesday the air pollution levels measured at Athlone, Bellville South, Goodwood and Table View were classified as moderately over the international limits and as "very high" in Khayelitsha. On Tuesday, Goodwood, Bellville South and central Cape Town were moderately over the international limits, while Khayelitsha was way over the limit.

The city council's air pollution monitoring department recorded the presence of photochemical smog in the city on Tuesday, when Cape Town was shrouded in a yellow-brown haze.

Photochemical smog, which is associated with an increase in respiratory ailments, is produced by the action of sunlight on nitrogen oxide.

The main pollutants that the city measures are sulphur dioxide, nitrogen oxide, carbon monoxide, ozone and particulate matter like soot.

Durban's poor fight for clean air

By Grant Clark, BBC News in South Africa
Published: December 13, 2004

If a poor community believes it is being poisoned, how can it find out if its fears are justified? Grant Clark visits South Durban, where outdated government legislation has left locals fighting their own battle for the truth.

At first glance, the plastic buckets stacked in the corner of the environmental NGO office look like any others.

But the containers are an unlikely weapon in one poor community's fight against oil companies they say are responsible for widespread ill-health caused by years of pollution.

The vessels are used by a network of local volunteers, known as the Bucket Brigade, to gather air samples in neighbourhoods bordering oil refineries, as part of a campaign to monitor and document air pollution which they believe is coming from the plants.

In South Africa, as in many developing and newly industrialised countries, legislation on air pollution has failed to keep pace with mushrooming industries.

So local residents, like many in poor communities around the globe, have faced the problem of investigating their claim that industries on their doorsteps are making them sick.

Industrial basin

The small yet tenacious South Durban Community Environmental Alliance (SDCEA) has become the first African grassroots group to take the science into their own hands by taking their own air samples.

An internationally celebrated example of environmental justice in action, the campaign has seen a once-despondent community play a major part in lobbying the petroleum giants to change the way they process fuel.

Durban, a port city on South Africa's east coast, is home to almost three million people.

More than 280,000 of them live in south Durban, crammed into an industrial basin which houses the country's largest petrochemical hub as well as dozens of other chemical and manufacturing plants.

The low-income suburbs of Merebank and Wentworth, inhabited by people of mainly Indian and mixed-race descent, are literally surrounded by two large oil refineries and a paper mill.

The residents were settled there in the 1960s, several years after the petroleum plants were built, under apartheid segregation laws as a source of cheap labour for the industries.

The refineries are operated by Engen, a South African and Malaysian-owned company, and Sapref, a joint venture by British multinationals Shell and BP.

Taking action

The SDCEA was founded in 1993, and carried out an initial informal survey of the community.

The group says this revealed a high incidence of cancer and respiratory ailments among residents.

Benzene, a compound produced during the oil processing process, is a known cancer-causing agent while sulphur dioxide (SO₂), another major refinery by-product derived from burning oil, is a respiratory irritant and has been shown to aggravate asthma.

Believing the refineries were to blame, the Danish-funded NGO began mobilising people to take action against the oil corporations.

With many locals employed at the plants, residents were initially fearful about protesting.

"Some didn't even want to talk to us," says chairman Desmond D'Sa, a former petroleum plant worker who lives near the Engen installation.

But, inspired by a personal endorsement of their struggle by then president Nelson Mandela in the mid-to-late 1990s, hundreds now turn out for regular anti-pollution demonstrations.

A decade ago, the oil companies had few dealings with their residential neighbours and the relationship was poor.

Now both refineries have liaison committees where representatives from both sides meet to thrash out environmental concerns.

Emissions cuts

"If you look at it historically, there's no question this area has a pollution problem," says Wayne Hartmann, Engen refinery managing director.

"Are we part of that problem, historically? Yes, we use a lot of fuel and we have SO₂ emissions," he says.

But over the past 10 years, he says, the plant has reduced its emissions from an average of 46 tonnes a day in 1998 to a daily 25 tonnes this year.

Mr Hartmann admits, though, that the refinery still occasionally exceeds the stipulated guidelines for the maximum of SO₂ which can be emitted in a 10-minute peak period.

Sapref says it has spent more than \$40m over the last 11 years on enhancing its environmental performance.

"We've fitted low nitrogen oxide burners on all furnaces to reduce our emissions," said spokesperson Phumi Nhlapo.

"We've also switched from firing up their production processes with heavy fuel oil to gas, to reduce smoke and SO₂ emissions," he said.

A new sulphur recovery unit has reduced SO₂ emissions by 46%, the company says.

These changes are thanks, in no small part, to the south Durban communities' most successful weapon - the bucket air sampler.

It uses a small vacuum pump to suck air into a specialised clear plastic bag inside the bucket.

A laboratory in the US analyses samples and returns results detailing detected toxic gases such as sulphur dioxide, nitrous oxides and benzene.

The data has then been used to lobby Engen and Sapref.

"We think they have a usefulness, as long as the samples are captured, handled and transported properly. In fact, we use similar containers for monitoring at the plant," said Engen's Mr Hartmann.

But, he said, air pollution levels can fluctuate fast and the samplers do not record a pattern over time.

Irritating air

Despite recent improvements, however, the health problems are still there.

A 2002 medical study, carried out by Durban's Nelson Mandela School of Medicine and a US university, found that an abnormally high 52% of students and teachers at a primary school bordering the Engen plant suffered from asthma.

It found that increases in air pollution tended to aggravate asthma symptoms in children.

The petrol producers do not dispute the findings but argue that researchers were unable to establish a causal link between air pollution and the high prevalence of asthma among the school population.

For the community, the next step is to take legal action.

But, according to internationally recognised environmentalist Bobby Peek, targeting the companies would be difficult as it would be near-impossible to prove that illnesses suffered were caused by pollution coming from a particular plant.

Mr Peek, who grew up beneath Engen's stacks, says the activists are now considering taking action against the authorities.

"We are now looking at suing the government on constitutional grounds, for failing to ensure our right to protection from a harmful environment as stipulated in the constitution," he said.

Legislative change

A new batch of environmental laws, the National Air Quality Management Act, has just been passed by the South African parliament to replace outdated 1965 legislation with tighter controls and tougher sanctions.

But it will be two years before the full framework to enforce these is in place, Mr Peek said.

Martinus van Schalkwyk, the minister of environmental affairs and tourism, visited the south Durban basin earlier this year and said there were measures in place to improve the situation.

"I share the anger and frustration of this community. It is long overdue," he told the South African Broadcasting Corporation.

The local authorities have also established a "Multi-Point Plan" for the area. They say is a powerful model for tackling pollution and point to a 40% reduction in sulphur dioxide emissions in recent years.