



groundWork

COMMUNITY ACTION:

to clean up the
oil
industry
in South Africa

introduction

The apartheid government's decision to allow industry to continue without effective environmental governance or enforcement, has placed local communities at risk to chemical pollution exposure and other harmful continuous odours that are released during the production processes.

It is important to keep South African refineries in check through effective monitoring of air pollution. The biggest weakness of existing monitoring systems is that they are owned, managed and controlled by industry themselves. How can industry, the polluter, be its own watchdog?

For years, communities have told government and industry that pollution from industries is harmful to their health and well-being. Industry has been quick to counter these allegations with their own science and social investment programs or by deflecting attention from themselves by pointing to pollution from the burning of coal in homes for heat and cooking.

So communities are left to themselves to come up with answers and solutions to their environmental concerns. As a result, during 2000, *groundWork* began working with refinery communities in South Africa, attempting to give these communities the resources and knowledge needed to monitor the air they breathe and to challenge industries to clean up their act.

And now in 2002, refinery communities in Sasolburg, Secunda, Cape Town and South Durban are standing up and fighting back.

Community monitoring of air pollution, using the bucket brigade air monitoring method, has revealed that people living in refinery towns are constantly exposed to a deadly cocktail of chemicals. Air samples taken in South Africa's refinery towns reveal that a large number of chemicals are present in the air at dangerously high levels.

sasolburg

Sasolburg is a town in the Free State Province. It is named after Sasol, the South African company which refines coal into petrol and manufactures other chemical based products. Sasol practically owns the town. It owns or co-owns a number of chemical industries in the town including NATREF, an oil refinery which it co-owns with Total, the French-owned oil company. Sasol is a rich company with a profit margin of about R30 million a day. It has operations in other parts of the world including the US, Germany and Australia.

Zamdela, the black African township, is situated on the outskirts of Sasolburg and in the heart of the chemical industries. It is located down wind from pollution and chemicals used, produced and released from the surrounding chemical industries.

Flaring is a common practice in the Sasolburg area. It continues unabatedly, day and night with flares often a number of metres high, turning the night into day.

A huge waste coal ash dump is adjacent to the community and the ash often blows into the community leaving it covered with a layer of dirty black ash.



Sasol also controls, through sponsorship and resources, community involvement in environmental protection in Sasolburg. During 2001 a number of residents got together to form the Sasolburg Environmental Committee. The SEC has been fighting an uphill battle to counter industry's greenwash, through awareness programmes.

The SEC coordinates the community air-monitoring program in

Sasolburg. To date seven air samples have been taken in the Sasolburg area. These samples measured eighteen different toxic chemicals in the air, most of which were at elevated levels (i.e. at levels which can affect human health). The results of these samples have been reported to the community and the council. Six of the seven bucket samples taken in Sasolburg showed very high levels of benzene. This is cause for concern as long-term exposure to this chemical (a year or longer) could result in anaemia and leukaemia. Statistics from clinics in the area indicate a high rate of anaemia. High levels of hydrogen sulphide were also detected. This chemical is linked to respiratory problems, which was backed up by clinic reports of high prevalence of asthma and other lung conditions in Sasolburg.

As a result of the widely publicized results of the bucket samples taken in Sasolburg, Sasol enlisted the assistance of Leeds University and University of Potchefstroom to take more air samples in Sasolburg. The results of these samples confirmed the community's bucket samples, detecting high levels of benzene, toluene and mixed xylenes. Sasol consequently invested in about 40 canister-style sampling tools and now

takes air samples twice weekly around the plant. Sasol has also decided to model for vinyl chloride emissions, directly as a result of the detection of vinyl chloride in the air samples.

The SEC has addressed members of parliament about the air pollution problems in Sasolburg. Besides community awareness programmes, the SEC has also embarked upon a thorough screening of new industrial developments for the area. The SEC is also currently waging a campaign against a US funded proposal to build a hazardous waste incinerator in Sasolburg.

secunda

In Secunda, in the Mpumalanga province, Sasol has two more chemical plants: Sasol Two and Sasol Three. These plants produce liquid fuels and chemical feedstock from coal. The production of both Secunda plants is equivalent to a refinery with a crude capacity of between 150 and 170 thousand barrels per day. This process produces many byproducts which are used in the manufacture of plastics, cleaning detergents and other chemically based products.

The largest black people residential area in Secunda, is eMbalenhle, a township down wind from Sasol and surrounded by mines and the local dump site. Black people were forcibly removed to eMbalenhle in the Apartheid era.

According to the local municipality a large percentage of the young people in eMbalenhle suffer from respiratory illnesses like sinus problems, asthma, TB, burning sensations in the throat and chest, as well as from skin irritations and burning eyes.

Sasol has invested huge resources into studying the impact of the burning of coal in the home for cooking and heating. This, together with its other social investment programs, has deflected attention away from Sasol as a polluter.

The eMbalenhle Youth Environmental Club (EYEC) and the Highveld East Community Environmental Monitoring Alliance (HECEMA) lead the community's fight against pollution. Awareness around industrial pollution concerns is the foundation of the communities fight against Sasol's pollution. With the assistance of *groundWork* they are also starting to implement their own air-monitoring programme. They have participated in several national workshops on air quality organized by *groundWork*.

tableview

The Caltex refinery is in the residential area of Tableview and is less than 3km from several other residential areas.

The Table View Residents Association has for years been leading the campaign to improve air quality in the area. They were involved in taking air samples, using the bucket brigade method, during 2000. One grab air sample was taken here in 2000, using the bucket method. 31 chemicals were detected of which 12 are categorized as toxic air pollutants by the USEPA (United States Environmental Protection Agency). Toxic air pollutants are suspected to cause health problems or environmental effects. Six of the chemicals were at elevated levels and a cause of concern. Residents in Table View say they have a high prevalence of respiratory problems (especially asthma) as well as chest-related illnesses, coughs, sore throats, puffy eyes, weak immune systems, sinus complications, headaches, eye infections, ear infections, skin infections, allergies, and insomnia. Bad smells are also a problem, especially at night.

In addition the Table View Residents Association have taken their plight to the SA Human Rights Commission, alleging that they are suffering human rights abuses as a result of the operations of the Caltex refinery.

south durban

There are two large oil refineries in South Durban, just two kilometres apart. They are the Shell and BP refinery (officially known as the South African Petroleum Refinery) and the Engen refinery. The Shell/BP refinery is over forty years old and its infrastructure is deteriorating rapidly. As a result there are

groundWork





more and more spills or accidents at the plant. The Engen refinery, now owned by Petronas, the Malaysian state fuel company, also regularly suffers serious incidents. The area is also home to an airport, a paper mill, many other chemical industries and is adjacent to the large port of Durban.

For decades the community has claimed that they experience exceptionally high levels of illnesses in the area, especially cancers and respiratory problems. They have alleged that these illnesses are pollution related. For some years now the South Durban Community Environmental Alliance (SDCEA) has been spearheading local efforts to reduce air pollution in the area. The Alliance has established an air monitoring committee and has adopted a community program to monitor air pollution in the area.

With the assistance of *groundWork*, the Alliance was involved in taking a bucket sample in 2000. The sample was taken on the boundary of Engen and sent to the US for analysis. 22 chemicals were detected in the sample, 7 of which are categorised as toxic (hazardous) chemicals. Three of these were at levels of concern, including benzene and toluene, which were high. Benzene is known to cause leukaemia, a form of cancer. A subsequent investigation by a local journalist revealed that leukaemia levels in South Durban were 24 times higher than the national average.

A study currently being undertaken by the University of Natal Medical School, the Durban Institute of Technology and the University of Michigan has found that children in South Durban are up to four times likely to suffer from chest complaints than children from other areas of the city of Durban. The school children at Settlers Primary School (which is located midway between the two refineries) show high absentee rates when the wind blows into the classrooms. South Durban residents also recently bore additional costs when the Shell/BP refinery's fuel pipelines leaked over one million litres of petrol underground under houses - people had to be relocated. Often their daily routine is disrupted due to intrusive maintenance on the pipelines in the neighbourhood that clashes with children's play areas, access roads and local public housing estates.



In late 2000, following the release of the bucket results for South Durban and press reports, the National Minister of Environmental Affairs, Valli Moosa, introduced a special Air Quality Management Plan (AQMP) to reduce pollution in the South Durban basin. Should this multi-pronged strategy succeed in South Durban it will be replicated in other pollution hot spots. In the past couple of years, these two refineries have also spent millions of rands on environmental improvements to bring about emission reductions. National exchanges

Since 2000 *groundWork* has on several occasions brought representatives from the different refinery communities together to share their experiences and skills. These included a community exchange workshop in Durban in November 2001 and a national Air Quality Workshop in Sasolburg in July 2002. In addition five youths from these various refinery communities took part in an international youth exchange in the USA in May 2002. This youth exchange program, entitled Project X-change, brought together South African and American youth on environmental justice issues. Further, one representative each from the eMbalenhle, Zamdela and Joe Slovo (near Table View) communities have undergone training to become *groundWork* community based interns.

ground  **ork**

conclusion

With the support and assistance of *groundWork*, refinery communities are playing a direct role in monitoring air pollution emissions from the neighbouring plants, using the bucket brigade sampling and monitoring techniques. Communities have become more proactive and empowered since initiating the Bucket Brigade and as a result government and the polluting oil industries have been pressured into making environmental improvements.

The fight against industrial pollution is also a fight against unscrupulous industries. Corporate giants like Sasol, Petronas, Caltex, BP and Shell, make huge profits and wield considerable influence over political decision makers. This complicates the struggle that poor communities wage for accountable and just industrial practices in South Africa.

191c Burger Street
Pietermaritzburg
3201
PO Box 2375
Pietermaritzburg
3200
Tel: 033-342 5662
Fax: 033-342 5665
team@groundwork.org.za
www.groundwork.org.za