

Foul air on the Highveld – the sour smell of environmental racism

- DAVID HALLOWES - 22 JAN 2018 01:01 (SOUTH AFRICA)



[File Photo: The sun sets behind the cooling towers of the Hendrina Power Station in Mpumalanga, August 29, 2011. Hendrina Power Station is currently one of the oldest operating power stations in South Africa. REUTERS/Siphiwe Sibeko](#)

“Emissions” is a tame word. It does not capture the physical force of hot exhaust gas blasted from industrial stacks on the Mpumalanga Highveld. By DAVID HALLOWES.

Eskom’s Duvha power station burns about 46,000 tonnes of coal a day and pumps out 8.4-million cubic metres per hour (m^3/h) from its two stacks. That’s more than 200-billion litres of dirty gas per day propelled from the stack at a temperature of 150°C and a speed of 82km/h.

At Sasol’s plant in Secunda, the two main stacks blast out 22.4-million m^3/h of gas at 185°C and up to 100km/h. The plant has eight more stacks which pump out another 1.3-million m^3/h . The 10 stacks together thrust 568-billion litres of exhaust gas into the air every day.

What’s in the exhaust – the emissions – is also shocking. Eskom has 11 coal power stations on the Mpumalanga Highveld. When they are working at full capacity, according to Eskom, they produce about 195-million tonnes of carbon dioxide (CO_2) a year, 1.3-million tonnes of sulphur dioxide (SO_2),

815,000 tonnes of nitrogen oxides (NOx) and 86,000 tonnes of particulates (PM10). The new Kusile power station will add to the count.

Sasol reports global emissions but, since about 2005, has refused to give local emissions. The Secunda plant, however, is known to be the largest single point source of CO2 in the world and, in 2004, emitted 52-million tonnes. Its total greenhouse gas emissions are probably over 60-million tonnes a year. It also produces 190,000 tonnes of SO2 a year, 148,000 tonnes of NOx and 8,000 tonnes of PM10, according to the Department of Environmental Affairs' (DEA) air quality management plan for the Highveld published in 2011.

The metal smelters on the Highveld emit another 39,000 tonnes of SO2 a year, 4,000 tonnes of NOx, and a massive 47,000 tonnes of particulates, according to the DEA's air quality management plan. It does not give a breakdown for each plant or even list them. The emissions come from the furnaces, kilns and ovens and also the dust blown off slag heaps and waste dumps and the particulates are laced with toxic metals.

The coal mines add another 136,000 tonnes of PM10 a year. Mine blasting blows huge clouds of dust into the air, often accompanied by a hailstorm of shattered rock, while the succession of coal trucks kick up dust from coal-black roads. Emissions from spontaneous combustion – the fires that constantly break out on mines, discard dumps and stockpiles – go uncounted.

This torrent of pollution pours over the whole region but local black communities get it in the face. In Embalenhle, downwind of Sasol, people complain of eye irritation and headaches as well as lung infections. They believe emissions intensify at night, and sleep with their windows closed. "When Sasol releases steam at night, there is a bad odour [and] you inhale the chemicals." Those who have worked inside the plant can sniff out the polluting production units.

They say that Sasol now prefers to recruit people from outside the area while sub-contracting companies are from out of town and bring their own labour with them. "They are killing us but they don't even give us jobs."

People remember when Sasol was built on farm land in the late 1970s. Embalenhle's location is not accidental. Secunda, the white town, was laid out as a garden city upstream and upwind of the plant. It even has a small wildlife park to show, as Sasol puts it, that "nature and technology should coexist". Black people were relocated from farms and the local village of Driefontein to Embalenhle, downwind and downstream of the plant and next to the massive discard dumps, ash heaps, tar pits and effluent ponds.

The big metal smelters date from the late 1950s. Anglo American either built or acquired all but one of the Witbank (Emalahleni) plants and, by the mid-1970s, was running them as a single system under Highveld Steel. It sold the plants piecemeal in the mid-2000s to various offshore companies.

Anglo also dominated the local coal fields through the South African Coal Estates acquired in 1945. Greenside, Landau, Kleinkopje and Navigation collieries are all still in business. Coronation, between Witbank town and the Ferrobank industrial area, lies abandoned. The shack settlement of Likazi now sits atop the land, which is burning underground and collapsing into sinkholes.

With a history going back to the 19th Century, there was never a single and supposedly rational plan for Witbank as at Secunda. But the racist outcomes were not that different.

The old township of Ackerville is located just below Ferrobank. The hilltop above them is dominated by two massive plants: Samancor's Ferrrometals and Duferco's Vanchem. Ferrrometals is "the largest

single ferrochrome producer in the western world”, according to the company. Vanchem produces vanadium and looks rusty and dusty. Workers say that’s because vanadium is extremely corrosive and that cladding, conveyors and pipes are constantly replaced.

Alongside it is a large slag heap with water pooled in a depression at the top. At the bottom, water seeps out and gathers in a ditch lined with white salts. This black hill of waste overlooks the Transvaal and Delagoa Bay (T&DB) mine, another abandoned coal mine that has burned underground for 70 years or more. Active mining has recently restarted outside the danger zone and just a couple of hundred metres from Ackerville. Houses are starting to crack with the blasting.

The large township of KwaGuqa stretches up the other side of the valley from Ferrobank. At the bottom runs the heavily polluted Brugspruit. Across the N4 freeway are Transalloys and Highveld Steel. Highveld crowns the hill opposite KwaGuqa Section 14.

In Ackerville, people say that the worst time of the year is August when it is dry and windy. The nights are worse than days. Everyone sleeps with their windows closed but the dust gets in anyway and gathers on the curtains. Many use purifiers or nebulisers or are “on oxygen”. In the morning people sweep black dust from their verandas. Some cannot manage that. Sweeping raises the dust and instantly triggers a range of symptoms – burning eyes, inflamed sinuses and headaches. People say, ““There is nowhere to complain to. Neither government nor industry takes responsibility.”

Inside the smelters, workers experience extreme heat and dust. At Vanchem, say the workers, “Your body shrinks. Your face changes. Nobody can work there for longer than 20 years and not die. The main damage is to the kidneys and lungs.” At Ferrrometals, chrome dust is thick in the air at the pelletising and sintering plants.

The workers get a double dose of pollution, at work and at home. For themselves, they expect an early death. Their children, they say, will never pass the medical tests to get jobs in the plants that polluted them.

In early 2016, Highveld and Vanchem shut down, broken by lousy management and the collapse of commodity prices. In KwaGuqa, next to Highveld, they say the air cleared instantly. In Ackerville, the wind still blows the shiny black vanadium dust from the hill of waste and there is no relief from the pollution pumped out by Ferrrometals.

A Highveld worker observed that many who work there “do not make babies”. She herself became pregnant only after the plant closed. So now she has a child but has lost the means of supporting her family. **DM**

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