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Okobo: Where coal residues, bacteria in water poses health risk amidst water scarcity



Equipment yard for heavy duty coal mining machines belonging to Zuma 828 Coal Ltd in Okobo Okpiko community near Ankpa town in Kogi State

Our correspondent travelled to Okobo Okpiko community in Anka LG of Kogi State where lab analysis shows that coal mining activities are contaminating water sources. However, the coal mining company denies wrongdoing and insists it is trying to improve the life of residents.

By Simon Echewofun Sunday

Just outside the Zuma 828 Coal Limited in Okobo Okpiko, Ankpa, Kogi State, Hauwa Sule, a mother of two, chatted with other women as they scooped water from a roadside pool.

The irony is that the source of the water is a borehole pump about a hundred meters away, which the women dare not approach because the owners, a coal mining company, has barred them from using it.

So the women rely on the water that runs down the red earth when mine workers use the pump and collects in a grassy swamp by the

roadside from where the women fetch it into buckets to use for domestic chores. The company had advised them not to drink the water for fear of contamination so the women use it for washing, bathing and cleaning of utensils. But findings by *Daily Trust on Sunday*, including lab analyses of the water from the borehole and a the only stream in the community, show that the water is loaded with bacteria and coal residues that are dangerous to the women and their families.

The 380 million tonnes coalmine site operated by Zuma 828 Coal Limited, a client company of Eta Zuma Group is only about

300 metres away from the Okobo Okpiko community centre, where the women are from.

Hauwa said water is scarce as their only stream has become contaminated by mining activities upstream. Zuma 828 Coal had promised since 2017 to supply the community from a couple of boreholes. *Daily Trust on Sunday* investigation however revealed that the said boreholes were not operational.

The firm resorted to using a water tanker to supply water but residents say it does not show up often. When this happens, the women supplement by fetching from the drainage that flows

from the open borehole tap at the administrative yard of the company.

“We use this one to wash plates, cook, bathe and do other things because the one they bring in tanker is reserved for drinking and we have to manage it, if not it takes time before we get it again,” Hauwa said.

Another woman, Mary Paul, said they are not allowed to fetch from the borehole at the yard even when it is turned on and the rushing water is allowed to flow down the road to where it pools. “If you go near [the borehole], they will pursue you. They only open it to rush to the roadside and we fetch

from this pool,” she said.

When our reporter went to the borehole with a four-litre container to fetch water, he was chased off by the security men including one armed with a pump action gun. He however pointed at a big plastic tank connected to the roof to collect rainwater for staff use. “Fetch that one. Don’t go to the borehole,” he said, tersely.

It was also observed that the two tap points in the community were not functional and the pipeline connected to them had broken, revealing a clear cause for the inoperativeness. This was

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despite the company's response to a *Daily Trust on Sunday's* investigation in 2018 that the water supply facilities were functional.

The people of Okobo Okpiko have resorted to going to the Okobo Atte stream, which is off their geographical boundary after their only stream became contaminated.

Our correspondent visited the stream along with some residents who said that they still have to fetch from it because of the distance to the neighbouring Atte community stream.

Shuaibu James, a farmer in the community, feels the stream has been their source of pride as their forefathers drank from it. "We still fetch this water for domestic use after the water settles down but the water is not the quality it used to be. For those of us who have farms closer here, we do not have a choice but to fetch from it."

The Atte stream was observed to be cleaner and flowing better than the Okpiko stream but the distance and communal ownership issue pose huge hurdles to Okpiko residents.

Harmful bacteria, Lead reign in Okobo water sources

A laboratory analysis of samples from Okobo Okpiko's stream and the borehole pond conducted at the Central Laboratory of the Kaduna State Water Corporation and the Nigerian Geological Survey Agency (NGSA) Research Laboratory in Kaduna showed that the water sources have high level of contaminants.

The stream water was discovered to have solid traces of fine-powdered coal residues.

The laboratory result shows that the turbidity (NTU) was extremely highly. Medical experts describe turbidity as the cloudiness or haziness of a fluid caused by large numbers of individual particles that are generally invisible to the naked eye, similar to smoke in air.

The turbidity in the water was 82.00 and that is far higher than the acceptable 0.5NTU scale specified by the Nigeria Standard for Drinking Water Quality (NSDWQ).

It also has low pH level (indicating how acidic or alkaline (basic) that a substance is), and it does not conform to the NSDWQ. According to experts at healthline.com, a web-based healthcare advisory platform, any water source with a pH lower than 6.5 is said to be acidic and harmful.

Citing the U.S. Environmental Protection Agency (EPA), it said, "The agency recommends that municipal drinking water suppliers keep their water supply at a pH of 6.5 to 8.5."

The acidic content in the stream water proved to be higher at 3.40 pH. The NSDWQ also allows from 6.5 to 8.5 pH level for a potable water source.

"If it's too low as detected in the stream, it is highly acidic and if above 8.5, it has high alkaline, not fit for drinking," Mr Tony Ewache, an Abuja-based microbiologist said.

Beside these, the result said, "Harmful bacteria were detected." While the NSDWQ allows at most 500 colony-forming unit (cfu) of



■ Particles of coal in the yellow coloured water at the only stream Okobo Okpiko has



■ Okobo Okpiko community elder, Ijachi James Opalua

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bacteria per millilitre of water, the Okobo Okpiko water has over 500cfu that could multiply just within 48 hours in such water.

For the groundwater the women fetch by the roadside, there were less significant traces of coal residues. Our reporter observed, such could be droppings from the trucks and trailers plying the untarred route with the mined coal. However, the laboratory analysis confirmed that the water also has low pH (water quality) that does not conform to the NSDWQ. The samples of the water taken has 5.70 pH as against the 6.5-8.5 pH level specified by the NSDWQ, making it acidic and unfit for drinking.

Just as with the result of the stream water, "harmful bacteria were detected," in the samples taken by the roadside. It was above the 500cfu of bacteria per millilitre of water that could multiply in 48 hours.

The roadside sample also has Lead (Pb) that is 0.1438 parts per million (ppm). That is above the 0.05ppm acceptable standards set by the World Health Organisation (WHO).

Also in the borehole groundwater, the level of Copper (Cu) was found to be 0.060ppm, nearly reaching the 1.0ppm bar, the WHO has allowed.

Our travails getting water - Residents

Mrs Fatima Ogwu, a resident, said the company delivers water in a tanker to the community once in a week, which is not enough in line



■ Hauwa Sule (centre) and her colleague fetches groundwater running from a borehole at Zuma 828 coal administrative block

with the agreement reached with the management in 2018.

"We are not complaining much because this is the rainy season and we get water enough in our household tanks but the last dry season was difficult for us as

the water they were bringing in a tanker to us once in a week was not enough to go round," she said.

Mr Suleiman Adaji, a commercial motorcycle operator, said the coal endowment could not be exhausted in the next 10 years at

Okobo Okpiko as he demanded that the mining firm take the cause of the community into full consideration.

"Before now, Dangote was one of the major customers of Zuma 828 Coal Ltd but he has started mining a nearby community called Awo. So the traffic to this place has reduced a little. If not, it used to be heavy so much that dust often bathes the roof of the houses especially during the dry season."

Pointing to an untarred pathway, some metres away from the Zuma 828 Coal Ltd administrative yard, he said: "This road leads to Awo, where Dangote now has a coal mining site. You can see that the entire Ankpa is endowed with coal. All we want is for the miners to give back to the community because their activities constitute health and environmental hazard to us. We have nowhere else to go to," he said.

After a Daily Trust investigative report in May 2018, the management promised to fulfil the agreements in delivering more on its Corporate Social Responsibility (CSR).

Since then the company had built a new block of classrooms just opposite the weighing scale section and trailer park (for coal loading) in the community.

This has brought excitement to some residents including the deputy community head called Ijachi, Mr James Opalua. "They

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built this block of classroom newly but the pupils do not have enough seats. Some philanthropists donated some but it is not enough," he said.

The company has also recently donated drugs to the community clinic to ensure the place is running.

"They tried and we are going to have another meeting with the management and our representatives from Ankpa town soon so they can fulfil other promises especially on water and compensation," ijachi Opalua said.

Speaking on the work at the mine site, some youth confirmed that after the Daily Trust report last year, they were paid from the five months' salary the company owed them. However, they said the workers are owed two to three months early this year. "The white man (the mine supervisor) promised the money will be paid but that it was used to settle some community services issue to pacify the community," one of the mine workers said in confidence.

Our reporter saw the bulldozer fixing damaged portions and expanding the road that leads from Okobo Okpiko to Okobo Ate and further connects to Enjema town, which tees-off from the tarred road that leads to Dangote's Awo coal mine and other communities.

"This is the rainy season. They are doing this expansion so that heavy trucks conveying coal from the site can pass through. It is also part of what the company said they will do for the community so they can have seamless feeder road access to neighbouring towns," Gabriel Ojonugwa, a resident familiar with the process said. None of those working on the road agreed to speak.

Speaking on the community efforts to ensure the miners solve the water scarcity problem, Ijachi Opalua said, "We recently consulted the white man (mine site head) and he told us that he will improve on the concerns we raised about the water. He said we will be using one of the water sources for washing while the tanker will be supplying another for drinking.

"For the road they are grading, it is for their own good because by August when the rain becomes intense, their trucks may get stuck in the mud. We mostly use motorcycles in this terrain," he said.

We're redeeming promises - Zuma

The Head, Corporate Relations for the Company, Ukaegbu Blessing confirmed that the firm was redeeming its promises agreed in a Community Development Agreement (CDA) document.

Speaking on telephone, he said: "The CDA we signed last year is being implemented to the latter. We signed that we will be providing medical supplies to health centres at Enjema and Okobo. We have done that."

Responding on the water scarcity and the contamination, the company's spokesperson said Zuma Coal commissioned three water projects in Enjema, Okobo Ate and in Okobo Okpiko in May 2018.

"The other two are not having that challenge now. For the mining community which is Okobo



■ Functional borehole donated by Zuma 828 at Okobo Ate community near Okpiko mine site



■ A heavy duty grader being used to rehabilitate the Enjema to Okobo road by Zuma 828 Coal Ltd recently

Okpiko, that place has iron ore mixing in water, so water was initially reticulated from Okobo Ate to Okpiko but after few months of handing over the water facility to them, the pipeline was vandalised thereby returning them to water scarcity," he explained.

He added that the company provides water regularly using tanker. "We are planning to have water from the coal mine

facility to the community centre. There is another ongoing water project still there," Ukaegbu said.

With the development investments the company said it has made, it called for cooperation from the communities to show some level of responsibility too.

"We also expect some measure of responsibility and obligation on their part, to secure those facilities so that vandals don't have access

to them. They are also to use them carefully towards their maximum utilisation. They should try to understand this because anything destroyed will take time before it is replaced," he said.

He also confirmed the road maintenance project saying, "We spent huge last year on road maintenance especially at the Enjema hotspot to make it accessible."

He also confirmed the road maintenance project saying, "We spent huge last year on road maintenance especially at the Enjema hotspot to make it accessible."

The company is also providing scholarship for the community and will begin building another block of classroom this year. "We are now working to provide a N 1 million scholarship support fund for students and pupils in Enjema and Okobo communities. We asked them to provide the modalities but it seems some people want to hijack that but they are resolving that issue at present.

"The good thing about the CDA is that it was signed in March 2018 and we still have till March 2020 to fulfil a lot of the obligations. That is when anyone can say we have not performed these to the latter. We have them running and soon we will get the acceptable list for the scholarship to finance," Ukaegbu noted.

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