

The children of lead

There is a town in Peru where the houses, the streets, the hospital, the school and a few green areas are covered in a grey dust. Among the particles forming this black cloud, which looks like sand, there is lead. Lead which comes out of the chimneys of a metal smelter which has brought work, "progress" and dozens of stories of children who do not put on weight or grow and who are consuming this toxic earth whenever they put their fingers in their mouths.

By *Marina Walker Guevara*

Mishell Barzola is six years old and has not been growing for some time. She is only one metre tall and weighs just 14 kilos, just a little more than her two-year-old brother Steven. Her mother, Paulina Canto, suspects that the lead has got into her body.

In La Oroya, Peru, where Mishell lives, the children are constantly breathing in and consuming the metal hanging in the air and settling on the ground. As they play football or marbles on the earthen streets, the wind whips up toxic dust into their faces. When they put their fingers in their mouths, these little ones are literally eating lead.

"My child doesn't look well to me", Paulina tells me as she sits in the small room she rents in this Andean town of 33,000 inhabitants, 180 kilometres southeast of Lima. Last night it rained and the water has dripped down on to the bed shared by three of the woman's four children. A weak ray of sunlight filters through the same hole in the roof through which the water seeped.

"Mishell is not gaining weight or growing. The doctor told me that it could be because of the high levels of lead", explains Paulina almost in a whisper, almost as if in this way the threat would become less real. Her daughter, Rosario, aged twelve, talks freely as children do: "Sometimes we are full of lead and it makes us ill. Our stomachs fill with lead. We can also die from this".

It is February 2005 and Paulina is awaiting the results of a blood test which will clear up all doubts regarding Mishell's health. In La Oroya, various studies have shown that practically all the children are suffering from lead poisoning, with levels of up to three times, on average, the maximum levels permitted by the World Health Organization. The reason lies on the other side of the copper-coloured waters of the Mantaro river, in the gigantic concrete chimney which has been spewing out its fumes into the face of La Oroya's inhabitants for 83 years.

The metallurgical complex in La Oroya is both the drama and the raison d'être of this town. It provides a living for the families of 4,000 workers who operate its furnaces processing lead, zinc, copper, gold and silver. Thousands of dealers and carriers depend on the smelter for their survival. And many others have managed to put their children's names on the social support list of the US company which has been running the plant since 1997, Doe Run Co., the largest producer of lead in North America.

At times, and although reality indicates otherwise, Paulina forces herself to think that perhaps Mishell is the exception among the children of La Oroya. That the special care she is giving her in terms of food and hygiene will have played their part. I want to believe it too. After all, I think, Mishell has an enviable amount of energy.

She runs up the steep steps of her district, plays ball and skips along the pavement with her friends. She is small, it is true, but she does not look ill. The great tragedy of lead poisoning is,

precisely, its stealth, the absence of immediate external or obvious signs. However, prolonged exposure to the metal causes irreversible damage to the central nervous system. It is a slow-acting, but devastating, poison.

I walk through the maze of narrow streets of La Oroya's Old Town, the area nearest to the smelter. Snippets of urban life compete with almost colonial scenes: the lack of running water, the absence of a sewage system, rubbish mounting up on the riverbank. There is an ironic beauty in the conglomeration of old houses painted in shades of blue, yellow and brown, improvised bars which begin to get busy early and internet booths packed with children and teenagers.

It was payday at the company yesterday and the street market is bursting with vendors selling everything from oil remedies made from snails to freshly fried trout. Scrawny dogs eat the scraps of food that fall from the stalls, and dozens of taxis congest the streets, sounding their horns. In the distance the monotonous, metallic movement of the train can be heard leaving the smelter, with its wagons laden with minerals, on its way to Puerto Callao, in Lima.

No one seems to take any notice of the heavy, unbreathable air, or the acidic smell that impregnates everything, sticking in your mouth, burning your eyes and throat. The inhabitants of La Oroya tell me that in time you get used to the "gases", as they call the combination of lead, arsenic and sulphur dioxide, among other contaminants which are emitted by the smelter. The smoke remains trapped between the hillsides enclosing the chaotic city.

Hugo Villa is a neurologist and has been working in La Oroya for 25 years. He meets me at the Essalud hospital, where the smelter workers and their families are treated, but asks me to be discreet and shows me to a room away from public areas. The doctor has joined the groups demanding that Doe Run comply with the environmental mitigation plan to which it committed when it purchased the plant eight years ago. But anyone who dares to make this demand, says Villa, is soon singled out by the union workers as a "traitor". "Anyone who brings up the health issue is going against the source of employment", the doctor explains in a low voice, just like Paulina. This is why, according to Villa, parents do not ask any questions about lead when they take their children to the hospital. Neither do they express concern. "It's as if they are afraid", says Villa, "I feel frustrated, powerless. It makes me angry. In 15 or 20 years' time a whole generation will be suffering from problems relating to psychomotor development".

The La Oroya plant was built by "the first gringos", as the locals refer to the Americans working for the Cerro de Pasco Copper Corporation which arrived in the heights of the Andes in 1922. The metallurgical complex enabled the mines the length and breadth of Peru's central mountain range to survive, as their minerals needed to be processed before they could be sold on the international market. Due to the complexity of the processes being carried out there, the processing of "dirty" minerals with a high sulphur content, La Oroya became a benchmark for metallurgical engineers all over the world.

A few years after the plant's construction, the farmers in the area began to complain that the smoke was drying out their pastures.

Those with good memories recall how the hills of La Oroya at that time were green, and how in the Mantaro, one of the largest rivers in Peru, you could fish for trout and frogs. Today the mountains surrounding La Oroya are bare and stained black, and some inhabitants say that the Mantaro "is dead". In 2003, a national law declared the basin an environmental emergency. The mines in the Cerro de Pasco area and the dozens of Andean villages whose sewage waste ends up in the river were also found responsible.

When in 1974 the Peruvian government expropriated and nationalized the metallurgical complex in La Oroya, the ground, air and water contamination became worse. The inhabitants got used to living with bloodshot eyes, and with a handkerchief always at hand to cover their faces when "the

smoke came". Little was known about lead poisoning in those days as no blood tests had yet been carried out on the population.

One morning in October 1997, a group of Americans signed an agreement with the government of the now fugitive Alberto Fujimori for 120 million dollars. Doe Run Co., with its headquarters in Missouri, had just purchased the smelting plant in La Oroya on more than advantageous terms. The sales agreement specified that the state-owned company Centromín Perú, which sold the complex to Doe Run, would deal with any legal claims made in relation to historical contamination of La Oroya for a period of ten years. During that period, the Americans agreed to develop a programme to control industrial emissions and effluents, among other environmental mitigation measures.

Doe Run and its New York parent company, Renco Group, are facing dozens of court cases in the United States relating to claims of damage to the environment and to health inflicted by its companies. The US Environmental Protection Agency has just filed a lawsuit against the Renco companies for alleged PCB contamination of areas surrounding the Great Salt Lake, in Utah, where a magnesium plant is in operation.

Renco's major shareholder is the enigmatic multimillionaire Ira Leon Rennert who, according to the US press, owns a mansion on Long Island, New York, which is twice the size of the White House, with 29 bedrooms and 40 bathrooms. One of his companies, AM General Corp., is one of the largest suppliers of military vehicles to the Pentagon, including the famous Humvee.

The history of Doe Run in the small town of Herculaneum, Missouri, where the company has a lead smelter, is no less controversial. When in 2001 blood lead levels in children began to rise, the government ordered Doe Run to reduce emissions from their chimney and to renew the soil in the gardens of houses close to the plant, in addition to other community protection measures.

So, over the last two years, the company has been complying with national air quality standards. A whole different scenario to that of Peru, where the smelter in La Oroya belches out into the atmosphere around two tonnes of lead every day, according to company documents. This is less lead than the inhabitants of La Oroya were inhaling when the plant was in the hands of the Peruvian government, but represents a figure which is 29 times higher than lead emissions at the Missouri plant.

The residents of La Oroya, including Paulina Canto and her family, welcomed Doe Run with open arms. During its first few years of operation, the company planted trees, organized painting competitions in schools and opened a canteen for the children of the poorest families. In no time, the corporate colours of Doe Run, white and green, began to cover the buildings of the state schools, the metal workers' union and the police station, a gift from the company.

Working conditions within the plant improved and the company set certain environmental projects in motion, such as the construction of a chamber in which to store arsenic trioxide, a highly toxic substance. However, in 2003 an international hearing held at the request of the Peruvian government showed that the air quality had deteriorated in La Oroya between 1995 and 2002, whilst lead production had increased. This was the beginning of a series of tussles between the government and the company which came to a head last year when Doe Run threatened to pull out of Peru if the January 2007 deadline for completing the environmental mitigation plan was not extended.

The mining executives argue that competition from China and poor prices for lead until 2004 – now on the rise – left them with no resources to conclude the project which was most important from an environmental point of view: the construction of a sulphuric acid plant, valued at 100 million US dollars, which would considerably reduce gas and metal emissions to the atmosphere. The plant would collect sulphur dioxide – a highly irritant gas and the primary cause of so-called acid rain which weakens soil and plants – and through a chemical process would transform it into

sulphuric acid, a marketable product.

The rumour that Doe Run might leave La Oroya quickly spread among the plant's workers and the town's inhabitants, causing panic.

In an unprecedented act in the country's history with unions, the metal workers' union sided with the company "in defence of the source of employment". At the beginning of last December a strike broke out which included roadblocks. It claimed the lives of two elderly people, who along with hundreds travelling by car, bus and lorry remained trapped for two days on the Carretera Central, the main access road from Lima to the central region of the country and to the rainforest.

This scene stood in stark contrast to the situation in other towns in Peru, where in recent years inhabitants have stopped the expansion of the mining industry. In the northern city of Cajamarca, the American company Newmont Co. decided to cancel its plans to expand the Yanacocha gold mine, the largest in Latin America, due to the roadblocks set up by the inhabitants in September 2004 in protest to the water contamination.

In La Oroya, economic hardship won the day.

"They told us that the company was going to leave and that another owner would arrive", says Paulina, who took part in some of the December marches in support of Doe Run. She recognises that the contamination caused by the smelter is harming her family, but says that without the plant, La Oroya would disappear off the map within a few months.

At the end of 2004, President Alejandro Toledo signed Supreme Decree 046 which allows Doe Run and other mining companies in financial straits to apply for extensions to deadlines of up to four years in relation to specific projects within their environmental mitigation programmes.

The decree infuriated national and international environmental groups, the Catholic Church and the regional government of Junín, under which La Oroya falls. It also cost the job of the former Director General for Mining, María Chappuis, who was opposed to Doe Run being granted additional time. "I believe in sustainable mining, not in mining at any price", says Chappuis as she sits on the balcony of her house in Lima. There is a silence and she continues: "I feel sorry for the people of La Oroya. They have known nothing else; they think that all smelters operate like Doe Run".

After several days of conversing with me and welcoming me into her home, Paulina has become evasive. She looks worried. Her children who before would run to welcome me, now smile at me, but keep their distance. Finally one of the girls tells me, hastily, that "the ladies at Doe Run" have called her mummy and have questioned her about her conversations with me. Paulina's anxiety is more than justified. Although her husband is not a worker at the plant, three of her four children have their lunch every day in the company's canteen.

Last Christmas, the young children were given electronic robots and Barbie dolls, presents from Doe Run Perú. And twice a week the mother and her children wash in the showers provided by the company to certain families in need.

The "ladies" are Doe Run social workers and they assure me that they did not wish to intimidate Paulina, but to protect her from "sensationalist journalists".

A few hours later I knock on Paulina's door once more. This time she lets me in and tells me that the Doe Run social workers have visited her and have told her that "it is OK" to talk to me. "I'm very grateful to the company for the help it's giving me", she hastens to tell me, nervously.

We look at each other in silence for a few seconds. I ask her about Mishell's blood test. She tells me that she still knows nothing. "They are taking a long time in producing the results", Paulina

lets out somewhat anxiously as she puts Steven on her back. Mishell is one of the 788 children of La Oroya's Old Town who took part in a lead study performed by the Ministry of Health and Doe Run towards the end of 2004.

After several months of waiting for the results, rumours have begun to circulate among residents. The words being whispered on the street are that the lead levels have proven to be high. That nothing much has changed for the children of La Oroya in spite of the company's efforts to promote hygiene campaigns in the town. Paulina does not repeat the rumours. She prefers to act rather than speculate. So she buys chicken whenever she can so that Mishell's soup is more nutritious, and she sends the little girl every morning to the communal hand washing organized by Doe Run to prevent children from consuming lead.

The women responsible for moving these hygiene campaigns forward are the so-called "environmental delegates", a group of some seventy volunteer housewives who, according to their main critics, spread the company's message among residents, in addition to sweeping the streets and washing hands. They are, it is said, an effective social control mechanism.

I do not exactly get a warm reception from the delegates. One of them approaches me and interrogates me in the street about the motives for my visit. Specifically, she asks me why I am talking to Paulina and her children so much.

"How do you think we feel when we hear that our children are stupid? Many children from here go to university", another delegate, Elizabeth Canales, shouts at me when I introduce myself. She is referring to television reports discussing the possible effects of lead on the intellectual development of children in La Oroya.

Within minutes I am surrounded by seven women who, leaning on their brooms, interrupt each other and tell me that yes, there is contamination, but that it was worse before and that "after all, Doe Run does feed and clothe the children, something that never happened when the government was running the plant".

"Come on, ladies, clean up. Move as if you were dancing", I hear Canales shouting to the other delegates as I walk away from Calle 2 de Mayo. The ladies are right to clean, although the experts doubt whether it is of much use if the source of the contamination is not reduced.

A recent study by the NGO Occupational Knowledge in California and by the Lima Labour Foundation showed that 88% of the soil samples taken in homes, schools and businesses in La Oroya contained high levels of lead.

One third of the families in La Oroya live in houses with only one room, with no bathroom or running water. Life therefore spills out on to the pavement, where the women cook, wash and bathe their small children in plastic basins. But "when the fumes come", they tell me, the mothers make their children go inside, quickly, and they close the doors and windows behind them.

"It's hopeless living here", says Carmen C6ndor, a single mum who had several sleepless nights when in 2003 doctors told her that her son, Brayam Rosas, had high lead levels in his body. "The truth is that we are all contaminated."

Although they do not know each other, Carmen and Paulina share the same concern: their children are not growing, a common characteristic in children suffering from lead poisoning. Brayam, aged seven, is 12 centimetres shorter than he should be for his age and weight. "I'm short", says the little boy putting the palm of his hand on top of his head and smiling innocently. "Sometimes I don't eat much", Brayam tells me. Carmen nods in agreement. "I'm scared that he'll stay small, that he won't grow any more", she says, pressing her hands together.

Some political leaders, however, can find no major causes for concern. "There may be the odd child suffering from the effects of lead, but I don't know of any child having been hospitalized for this reason", says impassively Clemente Quincho, the mayor of La Oroya, who led the December strike to pressure the Peruvian government into support of Doe Run. Sitting in his government office, surrounded by diplomas of merit and a trophy he won in a football tournament organized by Doe Run, Quincho refutes claims that the company is manipulating the town council. "I refused trips offered to me by the NGOs [environmentalists] and the trip to Missouri offered to me by the company", he states. He then settles into his chair and tells me that his three sons were brought up in La Oroya and yet, "they are very intelligent".

Other parents, however, would like to pack their suitcases and take their children away from here for good. Lucy Echeverría is one of these because her eight-year-old daughter, Diana, suffers from asthma. For children with breathing problems, the threat of sulphur dioxide is added to that of lead.

"There are times when they let out too much gas. Everything turns misty and your eyes burn. I can't breathe. My daughter tells me that it's horrible here and that we'd be better off going somewhere else", says Lucy, who sends Diana to stay with relatives in Huanoco during the holidays so that she can have a break from the fumes.

The smelter's chimney spews out over 800 tonnes of sulphur dioxide daily, more than five times the maximum limits permitted by Peruvian law. These are precisely the emissions which would be reduced with the construction of the sulphuric acid plant that Doe Run wants to postpone until 2011.

Far from the fumes of La Oroya, sitting in a glazed office in the smart Lima district of San Isidro, Bruce Neil, President of Doe Run Perú, assures me that the company applies the same environmental standards in South America as it does in the United States. He says that the emissions have been reduced by over a third and that they will continue to improve.

"We have a plant which is 83 years old and which we have been running for 7½ years and it's being presented as if it were an American business. This classification is not correct, it's unfair", claims Neil. At his side, his right-hand man, José Mogrovejo, sits in silence. He was the Director of Environmental Affairs at the Ministry of Energy and Mines in Peru, the body responsible for overseeing Doe Run, before accepting the post of Vice-President of Environmental Affairs at Doe Run Perú.

"I'm a father and a grandfather", Neil tells me slowly in English, "the fact that there are children with high lead levels is absolutely unacceptable. We must bring this figure down to zero". He then tells me the other side of the story: "Metal improves our lives. This building is made from minerals and metals, and cars and your tape recorder too. We can't live without metals".

At six years of age, Mishell Barzola does not understand about corporate interests, about environmental rights or social protest. She is playing happily with the Barbie doll that Doe Run gave her for Christmas. "She's a bride, with a veil and with music", Mishell tells me, arranging the doll's shiny, blonde hair. "We look after these toys as they're the only ones we have", she says very seriously. During my final days in La Oroya I notice that Paulina is becoming increasingly anxious about Mishell's blood test results. She goes almost every day to the doctor's surgery provided by the company and the government to ask if there is any news. And every day she returns with the same reply: "later". Paulina tells me that she wants to learn more about lead in order to look after her children better, and that the Doe Run social workers have promised her and other mothers that there will be a talk later on.

Paulina is hopeful that the company will keep its promises and clean the air in La Oroya. "In the meantime, they tell me that the most important thing is hygiene and diet. I'm very careful about cleanliness. I bathe the children, I wash their hands. When the gas comes I shut the children in

here. They're used to it now. I close the door and windows until the fumes stop".

Finally, at the end of March, Doe Run and the Peruvian Ministry of Health released the results of the lead study. All but one of the 788 children under seven years of age tested have, on average, three times more lead than the maximum 10 micrograms per decilitre of blood permitted by WHO. Almost half of the little ones are already showing signs of psychomotor deficiencies. Five children have so much lead that, according to US standards, they are at risk of death. I think of Paulina. I imagine her washing her family's clothes in a small communal basin on the pavement, just as I found her doing every morning, or stubbornly cleaning away the toxic dust which settled on her furniture and on the windowsills and which would always reappear, some hours later, in the same places.

Her efforts have not been able to stop the lead from getting into Mishell's kidneys, lungs, brain and liver. The little girl has 42 micrograms of lead per decilitre of blood, four times more than the health standard. Her brother Steven, aged two, has close to 50 micrograms.

Doe Run and the Ministry of Health have hastily devised a contingency plan to attend to the children who are worst affected by the contamination. A group of children will go to school in a neighbouring village to avoid, at least during the day, exposure to toxic emissions. The other children are being monitored medically and nutritionally. But there is no telling what will happen to the thousands of children living in La Oroya who did not participate in the blood testing. In April a judge ordered the Ministry of Health to take urgent measures to protect all the inhabitants of La Oroya, but Peruvian officials have appealed against the decision.

In my mind I draw parallels with the city of Herculaneum, Missouri, where children are no longer seen playing in the vicinity of the smelter because Doe Run, under the watchful eye of the local government, is moving them all to neighbouring towns, where they can grow up in a lead-free environment. But La Oroya is in Peru, and in Latin America, the dilemma is usually a vicious circle: work or health, economic survival or the environment. Paulina Canto and her children know this only too well.