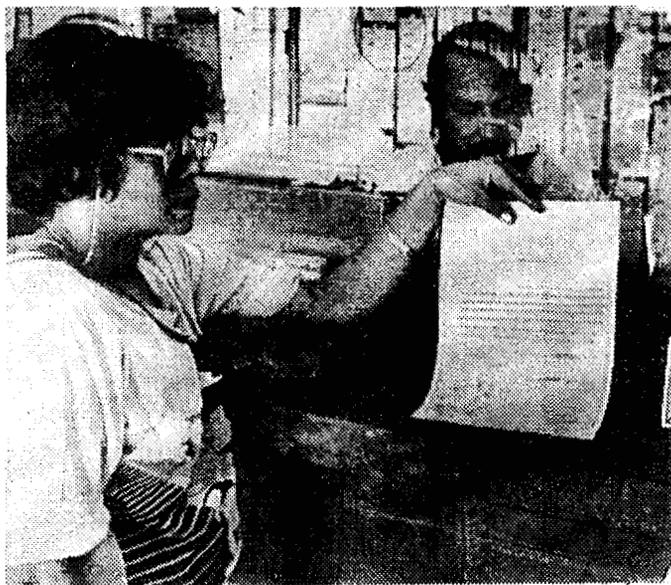


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AGENCE FRANCE-PRESSE

Goiania resident holds a certificate showing she is not radioactive.

Victims of Radiation Ostracized in Brazil

By Bradley Graham
Washington Post Foreign Service

GOIANIA, Brazil—Victimized by a freak case of radiation poisoning, this city built on beef and grain in Brazil's heartland is now being treated as a national pariah.

It lives with the haunting thought that a generation may have to pass before the full damage done by nuclear contamination can be known.

Buyers around the country are shunning goods from here, concerned that radiation may have touched cattle, crops and manufactured products—not just in Goiania, but across the rolling cattle lands and expanding urban centers of the large state of Goias, which includes the federal capital of Brasilia.

"Sales of the state's products are down almost 50 percent," said Maria Bezerra, a Goiania city council member. "People in Sao Paulo, for instance, are no longer accepting our milk, and a Sao Paulo wholesaler rejected a shipment of rice, offering to take

the stuff only for half price. That's nothing less than blackmail."

It has been nearly two months since two young, poor scavengers took a radiotherapy machine from an abandoned clinic here. The machine was broken open at a junkyard, and its glowing, lethal powder was unwittingly spread around. Residents of Goiania report being black-listed by hotels in the rest of Brazil. Last week, organizers of a national trade fair in Rio de Janeiro refused to accept an exhibition from Goias, which has participated in the show since the 1960s.

But there is also discrimination in Goiania itself. Just being the neighbor or relative of someone contaminated brings isolation and scorn.

"If you go on a bus, everyone draws back," said Maria Aparecida de Oliveira, who lived near Roberto Alves, the 22-year-old who took the radiation machine. "They make sly remarks. They

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REPOSITORY DOE - FORRESTAL

COLLECTION MARKEY FILES

BOX No. 30A6

FOLDER BRAZIL 87 GOIANIA
Cesium - 137

1005055

Brazilian City Shunned After Accident

BRAZIL, From A25

say we are from 'that street,' that we're all contaminated, that later everyone on the street is going to die of cancer."

Recently, someone went hunting stray cats in the night, apparently afraid they were radioactive.

To reassure the public that most people and things here are radiation-free, local health officials offer a simple screening service and issue special certificates. Hundreds of residents line up daily at a downtown sports stadium to have their radiation levels read. They bring pets, clothes, cars, furniture, household appliances—anything they worry might have come into contact with the deadly material.

One by one, they step up to a white-suited specialist who holds in his hand a radiation detector shaped like a portable hair dryer. As the nozzle of the sensor passes slowly over chests, backs, arms and legs, quiet fright registers in many eyes. Breaths go short in the tense hope that the machine's sensitive needle will show no movement.

For the past two weeks, no one has registered radioactive. Earlier, 244 people or their belongings showed up contaminated. Four persons have died. Others were saved, some with the help of an experimental drug brought in by Dr. Robert Gale of the University of California at Los Angeles, who led a team of foreign doctors.

So far, more than 78,000 of Goiania's 1 million people have been screened. Doctors estimate that several hundred people or more may eventually develop leukemia and other forms of cancer as a result of exposure to the cesium-137 powder that was loosed on Goiania.

Many of the contaminated survivors have been treated and released. About 25 remain quarantined in hospitals and state-run shelters. Some are expected to remain under medical observation for several months.

Police records say the tragedy began when Roberto Alves and 19-year-old Wagner Pereira entered the abandoned clinic of the Goiania Radiotherapy Institute on Sept. 13 and broke open the lead casing of a machine that had been used to treat cancer with controlled doses of radiation. The institute had moved to new quarters in downtown Goiania in 1985, leaving behind the bulky instrument.

The scavengers removed a stainless-steel cylinder the size of a one-



BY DAVE COOK—THE WASHINGTON POST

junkyard of Devair Ferreira, 36, a dealer in scrap metal and waste paper. Within a few days, Ferreira opened the cylinder and broke apart a small platinum capsule inside it that contained the cesium-137.

The blue material that spilled out was granular and coarse. It formed into lumps when exposed to the air's humidity. Most fascinating for Ferreira, his family and friends, it glowed in the dark like carnival glitter. They took bits of it home and smeared it on their clothing and bodies.

Ivo Ferreira, Devair's brother, let his six-year-old daughter, Leides, play with a lump of it on the floor of their home. Afterward, she ate a boiled egg coated with the powder, which had rubbed off her hands. Ten minutes later, she was vomiting, but her mother, Lurdes, figured the egg had been rotten.

Within days, others fell ill with nausea, fever, blisters, rashes and sores. Doctors at several local hospitals at first puzzled over what seemed to be symptoms of some tropical disease. In late September, health authorities finally diagnosed radiation sickness.

Specialists tracing the course of the contaminated material have been helped by the fact that much of it stayed among the members of the Ferreira family. But the family is large, and investigators suspect that some relatives and friends have not told all they know for fear of implicating themselves or others.

One team leader in the search for contamination said he doubted that all the radioactive sources can be located, because of the uncertain movements of those who were contaminated in the two weeks before

He estimated that only 70 percent of what is out there has been found.

On the wall of a makeshift headquarters at the stadium, government specialists have marked a giant city map with the irregular pattern of contamination in Goiania. Green squares represent areas already scrubbed clean of contaminated material by workers using soap and water or a cyanide-based compound. Other symbols mark areas being cleaned or cordoned-off sites still emitting dangerous levels of radiation. Radiation has also turned up in houses and hospitals in neighboring towns.

The clean-up is expected to last six months or more and produce tons of contaminated material. Authorities have already turned up 12 tons of radioactive waste paper from junkyards. They have had to dismantle a bus station, decontaminate two buses and five cars and hunt down five contaminated pigs. After some radioactive currency was found, they spent hours checking stacks of money in banks.

"I'm still not satisfied," said Donald Binns, a radiation protection supervisor with Brazil's Nuclear Energy Commission and one of the first specialists to arrive on the scene. "There must be other contaminated pieces out there."

Most of what has been found is still sitting in place, waiting to be loaded into thousands of concrete-lined metal drums that have arrived.

Where to put the waste has, predictably, sparked a major controversy. State officials have reluctantly agreed to store it provisionally on concrete platforms currently being constructed 8 miles west of Goiania. The federal government

See BRAZIL, A37, Col. 1

Nuclear Victims Shunned

BRAZIL, From A36

has no permanent disposal site for nuclear waste.

Critics of Brazil's ambitious nuclear power program are using the tragedy to press again for a restructuring of the Nuclear Energy Commission. They say that what happened here highlights the commission's inability to serve as both promoter and supervisor of atomic energy.

"I've proposed separating the responsibilities, but the government hasn't moved yet," said José Goldemberg, a leading Brazilian nuclear physicist and rector of the University of Sao Paulo. "I'm surprised it hasn't, but there is lots of resistance to restructuring the commission, which has many links to the military as well as other powerful ties."

Commission officials have been bickering with the state Health Department and federal Health Ministry over who is to blame for leaving the radiotherapy machine unattended. The commission claims it is responsible only for inspecting new installations of such equipment and insists that health authorities have the follow-up duty of periodic inspection. The state department says it lacks the specialists to inspect radioactive machines. The federal ministry explains that its inspection unit had been disbanded.

"Each is assigning responsibility to the other, and no one is controlling anything," said Antonio Ricardo Carvalho, a federal police inspector involved in the case. Indictments for homicide were reportedly being prepared last week against officials at all three agencies, Brazilian newspapers said.

Federal authorities have charged the owners and a radiology technician of the abandoned clinic with criminal negligence. Those who took the machine and unleashed its poison are unlikely to face charges, police say. But they are destined to suffer.

"I still don't know who is guilty of putting that thing in that place," said Lurdes Ferreira, the mother of the 6-year-old who ate the contaminated egg and died. "The only thing I know is that we are going to need a long treatment."

A foreign hematologist who has treated the most severely injured victims said they have maintained a kind of passive innocence throughout the ordeal. "They are very kind, very patient, toward us, but they are also very lost," the doctor said. "The look on their faces is like they're seeing something that's from another world happening to them. If they were Americans or Europeans, they would probably be panicked."

"I have the feeling," the doctor added, "that they still have not realized the whole story."