Healthy Concerns: Metsamor employees face risks, but need jobs

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Sergey Grigoryan climbs the stairs of his Metsamor home with difficulty. The sound of his steps muffles his asthmatic breathing. Although the weather is cold, Sergey drinks water without satisfying his thirst.

Life with reactors is a daily feature of Metsamor

‘‘My husband chokes, he has so much difficulty with breathing, the air is not enough for him, he gasps for breath after climbing the fourth floor,” says his wife, Magda Grigoryan. “All this affected his thyroid glands. His throat burns.”

Grigoryan, 48, was one of three workers at the Metsamor nuclear power plant who inhaled dust of a radioactive metal in a 1986 accident at the Metsamor nuclear power plant near Yerevan. Two other workers, Aramayis Gasparyan and Surik Shirvanyan, were with him at the time.

‘‘We were polishing the pipes through which the water to cool down uranium was flowing. The pipes should have been deactivated, but weren’t. During the work we in fact breathed in cobalt, which is a heavy metal,” Grigoryan explains.

Six years after the accident the sixth specialized clinical hospital of Moscow gave them a diagnosis of their disease: “Carriers of cobalt 60, under the influence of radioactive elements…” Of the friends, one, Surik Shirvanyan, died nine years after the accident, at age 34.
Since1992 Grigoryan and Gasparyan have been considered partially disabled. But they continue to work at the plant. It is not a choice, but necessity.
Today like many they continue to live in Metsamor and work at the NPP situated seven kilometers from the town. Metsamor residents hear with horror that the NPP may be closed. No matter how much they complain of health problems, the radioactivity, all the same the NPP remains their only workplace.

‘‘We know by heart that we must not eat mulberry and strawberry growing here, they are most subjected to radiation. But what shall we do, where should we go?” Magda says.

For years, the men were sent twice a year to Moscow for treatment that is not available in Armenia. But not anymore.

The men say there were told there is no money to pay for their treatment anymore. They are now sent to the Yerevan Scientific Center of Radiology and Burns, but the men say the results of their respiratory treatment are not as effective as they were in Moscow.

‘‘We choke for air, we can’t get enough air,” Gasparyan says.

Representatives of the state-run Metsamor did not respond for requests for comment on the treatment of the two workers.

But 20 years after the accident, Armenia’s nuclear regulatory agency, the Inspectorate for Nuclear and Radiation Safety Regulation, maintains that Metsamor is a safe place to work and meets the standards and requirements of the International Atomic Energy Agency.

Sergey Grigoryan

Ashot Mnatsakanyan, deputy chief of the inspectorate, and Aida Avetisyan, the agency’s chief specialist in

radiation safety, provided reports on radioactive exposure at Metsamor. The highest admissible dose of radiation, or rads, is five per year.
Grigoryan, Gasparyan and Shirvanyan were exposed to 1,000 rads (an amount of energy absorbed by one gram of tissue) in the 1986 accident.
Mnatsakanyan says all workers get regular checkups.

“There is no one who has exceeded even two rads,” Avetisyan says of workers at Metsamor. “We examine when (nuclear) fuel is transported or received. We look at how many people received it, in doing that work they get permission, in which it is written how many rads they can receive.”

State Nuclear Control specialists also give assurances that the nuclear power station poses no danger to people living in the nearby town of Metsamor, or anywhere else in Armenia.
Government statistics also show no unusual levels of radiation in other parts of Armenia.
But Magda Grigoryan, whose husband has suffered for years from his workplace accident, isn’t so sure that life outside the plant is safe.

“We have witnessed an increase in diseases, especially breast cancer among women, lung and prostate cancer among men,” she says. “We don’t know whether it is because of the nuclear station or not.”

Doctor-radiologist, toxicologist Lev Artishchev says that high doses of radiation cause the human organism to change its biochemical processes.

“Headaches, tearfulness, cough, ache in the throat, and then changes in tissues begin. A complex chemical process begins, and specialists call this process the radiation disease,” he says.

State Nuclear Control specialists give assurances that the emissions and exhaustions of the nuclear station do not pose danger to the population.


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Aramayis Gasparyan

“This is liquid emissions through the pipes and correspondingly the radionuclide composition. We conclude from these figures that the nuclear station cannot impact people. The population lives much farther than immediate radiation can affect them, 5-6 kilometers on the direct line. There is no direct impact of radiation,” Avetisyan says.

Environmentalists, though, worry about potential Metsamor problems other than fallout. Of specific concern is the matter of nuclear waste disposal.

Radioactive wastes of the ANPP are reprocessed and kept in special storerooms. The project of the ANPP does not envisage burial of wastes. The depot of radioactive wastes with high activity is in the reactor hall. Radioactive wastes with medium activity are kept in special tanks of the reactor workshop. After being concentrated they are stored “in a special subsidiary building”. Solid wastes with low activity are gathered, transported and placed in a near-surface storage located on the ANPP’s platform.

During Soviet times solid waste was shipped for storage in Russia. But last year the Russians said Armenia would have to pay for any future storage. ArmAtom director Vahram Petrosyan says that work is under way for a new storeroom that should be ready by the end of next year that should safely hold the waste for 50 years.

“We’ll live and see what happens in 50 years. Either we will have new technologies that will allow us to use that all again or on the contrary to receive new fuel from the burned one. In short, we will decide in 50 years, let’s not speak about it today,” he says.

Meanwhile, while potential closure is a major concern, talk of a possible new nuclear plant to replace the current one in Metsamor (see “In the Shadow of Chernobyl”) is good news according the town’s 10,000 residents.
They are not happy, however, that their electric bills are not reduced as a compensation for having the plant in their town – as it was during Soviet times.

“I work at the nuclear station, get 1,000 rads and I am supposed to pay 100 percent for electricity. I am ruining my health and am I supposed to pay for that, for what?,” says the disabled employee Aramayis Gasparyan. “That’s the pain, I am supposed to suffer without defending my rights, my health has been ruined, nothing is left of my lungs. They don’t provide us with transport to get to the station, do you understand that?”.