

At Their Own Risk: What Will Happen To The Fukushima Workers?

by Richard Knox

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Wally Santana/AP

An evacuee is screened for radiation exposure at a testing center in Koriyama, Japan, after a nuclear power plant on the coast of the Fukushima prefecture was damaged by Friday's earthquake.

The anonymous workers who remain at the Fukushima Daiichi nuclear power plant — Japanese officials now say there are 180 — fight against lengthening odds to prevent large amounts of radiation from leaking out.

On Wednesday morning Japan time, fire broke out for the second time in the outer containment housing of the plant's No. 4 reactor. Firefighters were sent in to douse it — maximally hazardous duty.

Nuclear safety experts say they can only guess what radiation doses these workers are absorbing. Hundreds of other luckier colleagues have been sent home, out of harm's way.

"These are heroes," says Dr. Chandon Guha, a radiation expert at Albert Einstein College of Medicine.

Guha shuddered when he heard that radiation levels spiked to 400 milliSieverts per hour on Tuesday — and that was at the plant's main gate. Experts infer that exposures were higher inside.

Levels have dropped since, but what really matters is cumulative radiation doses — and nobody outside the plant, and presumably the Japanese government, knows what that might be adding up to.

The International Atomic Energy Agency says it's seeking more detail on "the status of all workers" at Fukushima. Meanwhile, U.S. experts fret. "It's a matter of great concern," says John F. Ahearn, a former chairman of the Nuclear Regulatory Commission.



AFP/Getty Images

The No. 2 reactor at the Fukushima Daiichi nuclear power plant, as seen in screen grab. What will happen to the workers left behind to battle radiation leakage?

And more than that, worker safety has become a central obstacle in the desperate attempts to control or stave off the meltdown, or further melting, of nuclear fuel rods at the deteriorating power plant.

It's clearly too dangerous to send workers directly into the belly of the beast. That's why the Tokyo Electric Power Co. (TEPCO), which operates the plant, briefly considered — though has now apparently rejected — a scheme to send in military helicopters to dump water on the overheating spent-fuel rods at the No. 4 reactor. The reactor reportedly suffered a hydrogen explosion and fire on Tuesday that burned away parts of the roof that encloses the reactor.

Plant operators are desperately trying to keep water covering spent fuel rods in the reactor so they don't melt. When those rods are exposed, radiation levels can rise to "awesome levels," says nuclear safety expert David Lochbaum.

He says scientists have studied what would happen to similar U.S. plants if water levels in the spent-fuel pool drop even less than it has in Fukushima. It's not good.

"The dose rates at the railing of the pool ... would be high enough that you would receive a lethal dose in something like 16 seconds," Lochbaum says. "The high dose precludes a lot of worker actions, or turns them into suicide missions."

The question looms: Will Japanese officials feel compelled sometime in the next few days to withdraw the remaining workers? And if so, what then?