Fukushima 50: 'We felt like kamikaze pilots ready to sacrifice everything'

Nuclear plant staff live unseen in the shadow of the disaster, says worker Atsufumi Yoshizawa, as Japan grapples with the fallout from the world's worst nuclear accident since Chernobyl.

Dressed in a dark-blue work jacket with his company motif stamped on his breast pocket, Atsufumi Yoshizawa does not look like a man who spent the best part of a year in the thick of battle.

Yet that is how he describes his time among the group of engineers, technicians, soldiers and firefighters who risked their lives to remain at the heart of Japan's worst nuclear crisis.

The international media named them the Fukushima 50, although the actual number of workers who stayed to handle the triple meltdown at Fukushima Daiichi nuclear plant ran into the hundreds.

They became the heroes of the disaster. The world feted their bravery and selfless dedication, an antidote to the opprobrium being poured on Japan's hapless nuclear safety officials and politicians. But at home, almost all of the Fukushima 50 have remained anonymous. Some shun the spotlight, but many others fear reprisals as the public continues to grapple with the environmental and political fallout from the world's worst nuclear disaster since Chernobyl.

In a rare interview, Yoshizawa describes how the crisis unfolded, and why he does not consider himself a hero.
When Japan’s north-east coast was shaken by a magnitude 9.0 earthquake on the afternoon of 11 March 2011, Yoshizawa was certain of two things: he would not flee, and he would not die.

The 54-year-old nuclear engineer was about to end his shift at Fukushima Daiichi when the first powerful jolt arrived. Violent swaying ensued, causing panels to crash from the ceiling. Yoshizawa, who was in a corridor outside the plant’s main control room, was forced to crouch on the floor before taking shelter beneath a desk.

"I managed to look out of a window and saw parked cars bouncing up and down from the sheer force of the earthquake. I had never experienced anything like it," he said in a recent interview at the headquarters of the plant's operator, the Tokyo Electric Power Company (Tepco).

Yoshizawa, who joined the company straight from university 30 years ago, was one of 6,000 workers on site that afternoon, a third of them in the restricted area near the plant’s six reactors. His immediate thoughts were not with his wife and two daughters, who he assumed were safe at home in Yokohama, south of Tokyo, but with his colleagues, most of whom had families living near the plant.

Once the shaking had subsided, Yoshizawa, a slight, bespectacled man who has swapped his anti-radiation suit for a shirt and tie since his transfer last year to the Tepco headquarters, where he is general manager of the nuclear fuel cycle department, headed to an earthquake-proof room where senior staff had gathered to discuss their response.

It was there, less than an hour after the quake, that news began to circulate that the plant had been struck by a tsunami much bigger than the 3-metre wave predicted in news bulletins – and far higher than the facility's protective seawall had been built to withstand.

The evacuation building had no windows, so none of the men inside could see the tsunami as it ripped into the front of the reactor buildings, uprooting everything its path and sweeping them away on a tide of filthy seawater. "The next I heard was that there was a problem with the electricity supply, and there were reports of debris floating in the sea," Yoshizawa says.

But the reality was even more menacing. The tsunami had crippled the plant's backup power supply, plunging it into darkness. Worse still, it had deprived four of the six reactors of the power required to cool the nuclear fuel rods inside.
If Yoshizawa could consider himself fortunate in those circumstances, it was that the two reactors under his control – units five and six – were already in cold shutdown for planned maintenance checks. But for as long as the power stayed off, nuclear fuel rods in the remaining four reactors would melt, causing a potentially catastrophic release of radioactive material that would reach far beyond Fukushima.

Atsufumi Yoshizawa meets a member of an International Atomic Energy Agency delegation at the Fukushima plant in May 2011. Photograph: Tepco

Withdrawal

The prime minister at the time, Naoto Kan, has since claimed Tepco was poised to pull out all of its employees, believing the situation had become irrevocable. Kan, who has converted to the anti-nuclear cause since leaving office in autumn 2011, told staff a withdrawal would spell the end of Tepco. In his darkest moments, he would later admit, he was making mental preparations for a possible evacuation of greater Tokyo, an area of 35 million people.

Disagreements over a possible withdrawal rumoured to have taken place in the capital never filtered through to the men on the frontline, according to Yoshizawa. Some among the vast network of Tepco contractors and subcontractors ordered their employees to leave the plant. They were joined by other workers who lived in the communities in the path of the tsunami or which were imperilled by the reactor meltdowns. None of the workers had been able to communicate with their families; some would return to find their homes had been swept away. But at no point was anyone forced to stay, Yoshizawa said.

"I never thought of leaving. I had to stay and get a grip on the situation. I wasn't thinking about my family, only about the other workers and how worried they must have been about their own families.

"We knew that we would not be replaced. No one was forced to stay, but those of us who remained knew that we would be there until the end. We knew that we were the only people capable of saving the plant. Our determination surpassed all other considerations."

Yoshizawa says the hardest part of his job was sending junior colleagues into dangerous situations. The plant was frequently rocked by strong aftershocks, and the proximity of so much water to electrical equipment was an ever-present danger, as was the risk of acute radiation sickness.

The day after the tsunami, the plant was rocked again when a hydrogen explosion ripped though the building housing reactor No 2. Within days, two more units would suffer similar explosions.
"Several workers were injured during the hydrogen explosions, and telling people to go back into dangerous areas was tough. But [Masao] Yoshida [the then plant manager] never asked anyone to do the impossible; he knew that would only put lives at risk. By taking that approach, he united us all behind our mission."

Explosions

Momentary relief came when Yoshizawa was moved to a disaster-response headquarters 5km from the plant. While he was there, the Fukushima crisis entered an even more dangerous phase, as two explosions in reactor buildings hampered efforts to direct a constant stream of coolant water at overheating fuel rods.

After three days off-site, Yoshizawa and several Tepco colleagues decided they had no choice but to return to Fukushima Daiichi. As they left the crisis headquarters, firefighters, police officers, soldiers and nuclear officials lined up to salute them. "We felt like members of the Tokkotai [the kamikaze pilots of the second world war] in that we were prepared to sacrifice everything," he says. "The people lined up outside never said as much, but I could tell by their expressions that they didn’t think we would return."

By the time Yoshizawa arrived back at the plant, the international media were referring to him and his colleagues as the Fukushima 50, though the actual number of workers probably ran into the hundreds, with each team working shifts shortened by their exposure to constantly spiking atmospheric radiation. "I had heard the term Fukushima 50, but in fact there were many more people at the site, many more than I had imagined. And no one was panicking."

Over the weeks that followed, the Fukushima 50 resigned themselves to a daily routine of long shifts, wrapped head to toe in protective clothing, and uncomfortable nights sleeping on the floor of a radiation-proof building.

The scale of the disaster left the plant workers short of vital equipment. At one point there were not enough protective suits to go round, and stocks of personal radiation monitors had been damaged in the tsunami. "In normal circumstances you order what you need from outside, but we were in the middle of a nuclear evacuation, Japan was the scene of a major disaster, so no one could come near the plant," Yoshizawa says. "The few supplies we did have, we got ourselves."

Initially, the men survived on a diet of biscuits and other dried food. Deliveries of emergency supplies were out of the question while soldiers were still pulling bodies from the tsunami debris and getting aid to hundreds of thousands of survivors. The water shortage meant the Fukushima 50 were denied even bowls of warming instant noodles.
Tepco workers spray a green, resin-based dust protectant on the ground in the common pool area of the damaged Fukushima Daiichi plant. Photograph: Tepco/EPA

**Deprivation**

For the first fortnight of the crisis, each worker was given just one 500-millilitre PET bottle of water that had to last two days. "It was two weeks before I had my first cup of coffee," Yoshizawa says. "It tasted fantastic."

The long working hours, combined with a poor diet and sleep deprivation, took their toll on his health. He lost a lot of weight and his blood pressure soared.

It wasn't until December 2011, when the government declared the damaged reactors had reached a stable state known as cold shutdown that he and his colleagues could return to anything resembling regular working conditions.

Almost two years after the tsunami, the men who stayed behind at Fukushima Daiichi and spared Japan from an even worse fate occupy an uncomfortable place in the country's post-disaster psyche. While the Chilean miners who spent 69 days trapped deep underground in 2010 were feted as national heroes, most of the Fukushima workers continue to live unseen in the shadow of the disaster.

Tepco turns down most interview requests, and all but two of the handful of workers who have commented publicly did so on condition of anonymity. Most have chosen to remain silent, fearing they would be ostracised in the communities they tried, but failed, to prevent from turning into post-nuclear wastelands for years, perhaps decades.

Yoshizawa understands their anger. "Generally speaking, people in Japan believe we were the cause of the accident, and it's important to bear that in mind. As Tepco employees we have to take responsibility for the accident, and ensure that it never happens again. It's a matter of regaining people's trust, but it will take time."

"Looking back, maybe there were things we could have done better to prepare, but at the time we did everything possible to respond to the accident."

The perception that the workers perpetrated the accident and then botched their response appeared to permeate every level of Japanese society. The Fukushima 50 waited 18 months before the then prime minister, Yoshihiko Noda, publicly thanked them for "saving Japan", a gesture repeated this month by his successor, Shinzo Abe.
Another explosion rocks the Fukushima nuclear plant in Japan Photograph: ABC TV/EPA

Gratitude

If official expressions of gratitude were a long time coming, the men were buoyed from messages of support from all over the world, some of which decorate a huge Japanese flag that hangs in the Fukushima Daiichi central control room. Yoshizawa said Noda's visit to the plant last October was an honour, but added: "I don't consider myself a hero, but when I hear people thanking us for what we did, I'm grateful."

His account of a temporary return to "civilian" life one month after the disaster is perhaps the most telling commentary on the Fukushima 50's unheralded heroism.

As Yoshizawa left the plant, along with several other workers, to spend a few days with his family, he stripped to his underpants, completed a compulsory radiation check and changed into a tracksuit that was at least a size too big. He had grown an impressive beard, and his hair had become greasy and matted after four weeks without a bath or shower.

A few hours later, their bus arrived at Tokyo Station, where they were left to catch trains to their respective homes. "We must have looked strange, stepping off that bus in ill-fitting tracksuits, with long beards and dishevelled hair, and each carrying a plastic bag containing a few possessions," he says.

"But as we walked into the station no one gave us a second glance. Life in Tokyo appeared to be carrying on as normal, as if the Fukushima disaster had never happened. I sat down on the train and immediately noticed that people were avoiding sitting next to me."
Choice

Yoshizawa declined to divulge his internal radiation levels. They are abnormal, he admits, but not so high that he can never work at a nuclear power plant again. "I am not worried about my health." He has, by choice, had just one counselling session since he left Fukushima Daiichi. "Others have done it more regularly, it's important to have someone to talk to freely. But I don't kid myself that life will ever be the same. As a Tepco employee, returning to a normal life is impossible."

While they slowly withdraw from Japan's public consciousness, the ranks of the Fukushima 50 say they will never forget their time at the centre of a nuclear disaster that, without them, could have been far worse.

"There is a special bond between us," Yoshizawa says. "I can't put it into words – it's just a feeling we have towards one another. I guess it's the same as the camaraderie soldiers experience in wartime. In our case, the enemy was a nuclear power plant. And we fought it together."

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