

Japan's Failed Water Filtration System Praised by IAEA

By John LaForge

An official review by the International Atomic Energy Agency (IAEA) of Japan's efforts to manage nearly 1,000 million gallons of radioactive wastewater at Fukushima says that a team of its experts "welcomed progress" made by Japan on choosing how to dispose of 1.37 million cubic meters of radioactive wastewater left from cooling the extremely hot mounds of melted uranium fuel cores under the three melted and exploded nuclear reactors.

The IAEA reported on April 2, 2020 that, "Contaminated water from the Fukushima Daiichi Nuclear Power Station is treated through a process known as Advanced Liquid Processing System (ALPS) to remove radionuclides except tritium and then store it on site."*

Chernobyl-area Fires Spread Radiation Spewed by 1986 Disaster...Again

"Minor increases in radiation" — IAEA

Editor's note: The International Atomic Energy Agency (IAEA) is the UN's nuclear reactor agency, and was established to promote the nuclear power industry. IAEA's purpose, announced in its charter, says it "shall seek to accelerate and enlarge the contribution of atomic energy... throughout the world" and to "encourage...atomic energy for peaceful uses throughout the world." Often identified as a "watchdog agency," IAEA is a fully captured arm of the nuclear power lobby. IAEA's announcements routinely understate, or minimize the extent and the dangerousness of radiation releases, as well as the risks of radiation exposures.

Dangerously increased levels of radiation in breathable radioactive particles lofted and windblown by April wildfires in and around the Chernobyl reactor disaster exclusion zone—which was permanently contaminated in April 1986 by one of the world's worst radiation catastrophes—were reported April 13 by Kiev officials.



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The BBC and Reuters reported April 13 that acting head of Ukraine's state ecological inspection service, Yegor Firsov, said in an April 5 Facebook post that radiation levels in the area had risen substantially above normal.

"There is bad news. In the center of the fire, radiation is above normal," Firsov said, posting a video of a Geiger counter. "As you can see in the video, the readings of the device are 2.3, when the norm is 0.14. But this is only within the area of the fire outbreak," the UPI reported April 6. The reading was more than 16 times normal.

However, "Government officials later rejected this finding, and said the levels in the area were 'within normal limits,'" and "Mr Firsov also withdrew his remarks," the BBC said.

In short order Ukrainian government agencies and the IAEA went to work assuring the public that the

The IAEA went as far as to declare that "The ALPS multi-nuclide removal system continues to operate stably and reliably."

Remarkably, the glowing report on Japan's efforts ignored the spectacular and widely-reported failure of ALPS to separate deadly radioactive isotopes other than tritium on August 18, 2018.**

Vast quantities of highly radioactive particles were not caught by the ALPS and are now stored in giant tanks on the coastal Fukushima-Daiichi site. This coastline is still subject to regular and potentially severe earthquakes that could see the tanks ruptured and on-site workers and the Pacific Ocean highly contaminated in the event of another quake. The gross failure of the ALPS is reportedly being addressed by "re-filtering" the highly contaminated

radiation-tainted forest fire smoke was not a danger to people in Ukraine.

In an April 24 press release the IAEA said, "The burning of meadows, pastures and stubble has resulted in some minor increases in radiation due to the release of radionuclides transferred from soil contaminated in the 1986 accident. But the concentration of radioactive materials in the air remained below Ukraine's radiation safety norms and posed no public health concern, the SNRIU said," referring to the Ukraine's State Nuclear Regulatory Inspectorate of Ukraine.

"These fires happen almost every year"

Radio Free Europe reported April 26 that "Ukrainian officials have attributed smoky air in Kiev in recent days to fires in the nearby Zhytomyr region, assuring residents that radiation levels in the Ukrainian capital are within an acceptable range."

"Background radiation in [Kiev] is 'stable' and does 'not exceed the permissible values,' [Ukraine's] State Emergency Service said on April 26," the 34th anniversary of the catastrophic explosions and fires caused by Chernobyl's reactor 4, Radio Free Europe said.

Greenpeace Russia reported April 23 that "plumes of smoke caused smog in [Kiev], 250 kilometers away and although they did not exceed norms, higher levels of radioactivity than usual were detected."

NBC News reported April 18 that Volodymyr Demchuk, director of the Emergency Response Department, said in a video

statement, "The radioactive background in Kiev and the Kiev region is within normal limits."

Official assurances of "normal limits", and "permissible" or "acceptable" levels of radiation exposure studiously avoid saying that exposure to or inhaling radiation is "safe." Further, the IAEA and the Ukrainian authorities neglect any mention of particular isotopes in the air, what sorts of radiation was being emitted, where the radioactive particles might settle, the length of time the particles persist in the environment, and the risks posed by radioactive "daughter" elements left for decades by the radioactive decay process.

"Forest fires in contaminated areas are a big problem for Ukraine, Belarus, and Russia where five million people still live in contaminated areas according to official data. These fires happen almost every year," reported Greenpeace Russia's nuclear campaigner Rashid Alimov. —*JL*

wastewater through the same system, but this "do over" by the on-site operators is not mentioned by the IAEA expert panel.

The report notes instead that, "With the volume of ALPS-treated water expected to reach the planned tank capacity of approximately 1.37 million m³ around the summer of 2022, and taking into account that further treatment ... would be needed for implementation of any of the solutions considered by the Government of Japan, a decision on the disposition path should be taken urgently engaging all stakeholders." The panel also said, "The IAEA Review Team also notes that the ALPS-treated water will be further purified as necessary to meet the regulatory standards for discharge before dilution."

The panel's "specific advisory point one" is that, "The injected water used to cool the fuel debris mixes with ingressed water and contributes to the generation of contaminated water."

The phrase "ingressed water" is a veiled reference to the tons of ground water steadily pouring into the wrecked reactor buildings through earthquake-caused cracks in foundations, broken pipes, and smashed ductwork. This groundwater also floods the melted masses of uranium fuel and becomes highly contaminated.

Tepeco (operator of the Fukushima reactor), the Japanese government and the IAEA want to dump the vast volume of radioactive wastewater into the ocean.

The *Japan Times* reported March 25 that the company has drafted a plan to spend 20 to 30 years draining the large tanks into the Pacific.

Any dumping would add the wastewater's extremely long-lived radioactive materials, to that already poured into the Pacific by the 2011 disaster, and the nine continuous years of the sites releasing between 200 and 400 tons per day of contaminated water.

Radioactive materials littering the ocean and the ocean floor can be consumed by sea life where the isotopes bio-accumulate and bio-concentrate as they climb the food chain and find their way into seafood, pet food and fertilizer.

Several countries on the Pacific Rim still refuse to import fish from the area. Taiwan is demanding a cease to the pollution of the water. Consequently, Japan's fishing community fiercely opposes any ocean dumping of Tepeco's private wastewater problem.

* "IAEA Follow-up Review of Progress Made on Management of ALPS Treated Water and the Report of the Subcommittee on Handling of ALPS treated water at TEPCO's Fukushima-Daiichi Nuclear Power Station." <https://www.iaea.org/sites/default/files/20/04/review-report-020420.pdf>

** "ALPS System at Fukushima No. 1 Plant Failing to Remove More Than Tritium From Toxic Cooling Water," *Kyodo News Service, The Japan Times*, Aug. 19, 2018, <https://www.japantimes.co.jp/news/2018/08/19/national/alps-system-fukushima-no-1-plant-failing-remove-tritium-toxic-cooling-water/#.XsJecURKjX5>; "Fukushima Plant's ALPS Treatment System In Trouble," *Water Technology.com*, Aug. 27, 2018, <https://www.watertechnology.com/process-water/article/16212844/fukushima-plants-alps-treatment-system-in-trouble>; Citizen's Nuclear Info Center, (Tokyo) "Current State of Post-Accident Operations at Fukushima Daiichi Nuclear Power Station." April 3, 2020, <https://cnic.jp/english/?p=4837>

