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NUKEWATCH QUARTERLY



A publication of the Progressive Foundation — ISSN 1942-6305 — Fall 2019
News & Information on Nuclear Weapons, Power, Waste & Nonviolent Resistance

Nuclear Power & Weapons Don't Mix

Nuclear weapons and reactors give science a bad name. Combining the two can be a suicide mission.

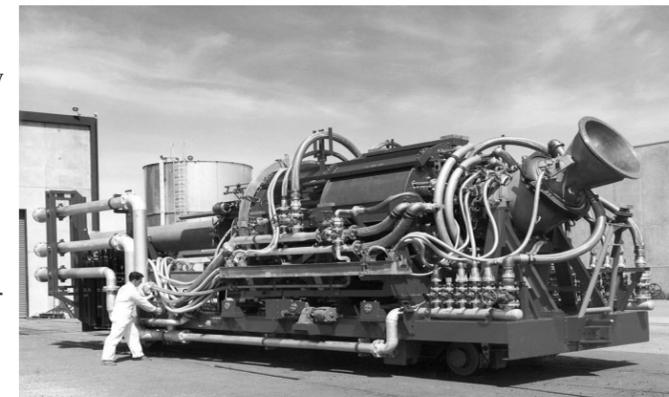
Five Russian government scientists and three others were killed August 8 near Nyonoksa, on the White Sea in Russia's far north, by the accidental explosion of what was reportedly a small nuclear reactor inside a missile. Exactly what kind of nuclear device blew up remains unclear.

According to news reports—frustratingly vague because of government secrecy and conflicting statements by federal agencies—the Russian Federation weapons experts who died were testing a new “nuclear-powered” Cruise missile, or trying to retrieve a failed one that fell into the sea. Pentagon analysts code-named the experimental missile “Skyfall.”

CBS News reported Aug. 12 that the explosion “could have contaminated the White Sea with radioactive waste.” Then, Sept. 4 Bellona—the environmental institute based in Oslo—reported that irradiated debris from the explosion had washed up on a nearby beach.

Rosatom, the Russian Federation's reactor and weapons agency, said in a statement Aug. 10 that the scientists who died were testing a “liquid propellant rocket engine” at a missile test site about 40 miles from the city of Arkhangelsk, Al Jazeera reported. But Bellona reported that news services citing intelligence sources had said, “the blast occurred during a mission to salvage a nuclear powered cruise missile from the bottom of the White Sea, off Russia's Arctic coast.”

The blast caused an international sensation, partly because a radiation spike was reported 18 miles away in Severodvinsk, a city of 183,000 people, and partly because of sketchy and contradictory information coming from Russian Federation authorities.



The US military tested then cancelled plans to power rockets with reactors. Radiation vented from the unshielded flying reactor and even working as planned Project Pluto's nuclear ramjet, above, would spew contrails full of radioactive fission products. US government photo.

City officials with the Emergencies Ministry in Severodvinsk said airborne radiation levels had risen to 20 times above the area's average, the Associated Press reported Aug. 14.

The defense ministry insisted the day of the explosion that no radiation had been released.

The online magazine Slate reviewed published accounts and reported Aug. 13 that Russian news outlets said “radiation readings briefly spiked to 200 times normal background levels, according to the *New York Times*, but those reports were quickly taken down. On Aug. 13, Russia's TASS news agency reported that the state weather agency said radiation levels in the nearby city of Severodvinsk rose between four and 16 times after the explosion. ... while the Russian defense ministry initially said there was no background radiation elevation at all.”

Rosatom officials initially told the media that what exploded was a “nuclear battery,” like the plutonium-238 packs—called “radioactive thermal generators” or RTGs—used by the United States and Russia to power instruments onboard long-distance outer space probes. “This is a nuclear battery” or a “nuclear isotope power

Continued from Cover

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source” for a rocket engine, said a spokesman for Rosatom, noting that the word “reactor” had nothing to do with the explosion.

However Rosgidromet, the Russian Federation's national weather agency, reported that among the radioactive isotopes that were dispersed, some in particular—strontium-91, barium-139, barium-140, and lanthanum-140—could only have come from a nuclear reactor accident.

On Aug. 26, Bellona confirmed that “The presence of decay products like barium and strontium is ... proof that it was a nuclear reactor that exploded,” quoting Nils Böhmer, a Norwegian governmental nuclear safety expert, who spoke to the *Barents Observer*. “Had it been an RTG, none of these isotopes would have been detected,” Böhmer said.

Hospital Workers Kept in the Dark

Secrecy regarding the exact nature of the accident extended to the surviving victims and the hospital staff that treated them.

Several of those seriously injured in the accident were brought to the Arkhangelsk Regional Clinical Hospital.

The *Moscow Times* and Reuters reported that as many as six of the injured were transported by helicopter to Moscow “wrapped in film” to be treated for radiation exposure.

The *Moscow Times* reported Aug. 16 that three injured men arrived at the hospital “naked and wrapped in translucent plastic bags.” The state of the patients made staff suspect they were dealing with something very serious.

The *New York Times* said Aug. 26 that doctors and nurses in Arkhangelsk “were not warned that patients arriving from the [explosion] site were contaminated with radiation, and treated them without protective clothing.”

The *Barents Observer* reported that 10 of the doctors who treated the injured were sent to the Federal Medical Biophysical Center in Moscow for medical treatment. When one of the doctors was later found to have radioactive cesium 137 in his tissue, the regional government in Arkhangelsk issued a statement saying the contamination was “with some degree of certainty” unrelated to the accident, and “likely from fish, mushrooms, lichens, seaweed” contaminated by another source, the statement said.

Officials told the doctor he probably ate “Fukushima crabs” while on vacation in Thailand. —*John LaForge*

Continued on back page