

Nuclear Shorts

Reactors in Space

Hidden beneath the glamour of outer space travel lurks the very real threat of potential nuclear disaster. In two recent articles, Karl Grossman, professor of journalism at State University of New York, calls attention to the use of plutonium batteries in NASA's deep-space missions. The Mars rover Perseverance is powered by 10.6 pounds of plutonium-238, which is 280 times more radioactive than the plutonium-239 used in nuclear weapons. The rover's tiny need of electricity (about 100 watts) could have been produced with solar panels, a safe option that was sidelined by the influence of the nuclear industry, according to Bruce Gagnon, coordinator of the Global Network Against Weapons and Nuclear Power in Space. NASA acknowledged that the Atlas V rocket carrying Perseverance had a chance of exploding on take-off, or burning up in Earth's atmosphere, spreading the deadly plutonium across Florida or the world.

Meanwhile, a February report from the National Academy of Sciences describes a partnership between NASA and the whole Pentagon, advocating the use of reactors in space citing "military advantages." The reactor industry drives this partnership, seeing space as a lucrative market. These plans proceed in spite of past disasters caused by faulty rockets and failed satellites, including the US Transit 5BN-3 that burned up in the atmosphere in 1964, dispersing plutonium which was later linked to increases in lung cancer. The unnecessary use of plutonium batteries and perhaps even reactors by NASA creates risks for everyone, but as Grossman says, "it's going to take enormous grassroots action — and efforts by those in public office — to stop it." —K. Grossman, "Plutonium, Perseverance and the Spellbound Press," *The Free Press*, Feb. 24; and "Nuclear Rockets to Mars?," *CounterPunch.org*, Feb. 16, 2021

Reactor Closures Leave Long-term Risks Behind

Five nuclear reactors in the United States will close in 2021 — a record for one year — four in Illinois, and one in New York state. The shutdowns reflect a long-term shift from poison power to safe energy sources like wind, solar, geothermal and "negawatts" derived from efficiency and conservation. Over the next 30 years, 24 reactors are projected to close, according to the US Energy Information Administration.

Shutting down nuclear reactors in the United States will slow the accumulation of radioactive waste and the industry's push to move it away from reactor sites. Yet the dilemma of designing, testing, building, and enacting extremely long-term waste isolation remains. Without a central federal waste repository, each of the country's 56 operating reactor stations have to manage and guard their own waste — for decades. This *ad hoc* arrangement was intended to be temporary, so even the 36 US reactors that have closed continue to store their waste on site. This open air parking lot system poses risks from floods, earthquakes, sea level rise, and plane crashes, and it creates easy targets for groups who might want to use radioactive waste to harm human health.

In Japan where most of the power reactors remain closed after the Fukushima catastrophe, former prime ministers Naoto Kan and Junichiro Koizumi urged the current Japanese government to abandon plans to reopen reactors or build new ones. At a joint press conference March 1, Koizumi praised Japan's abundant solar, wind, and hydropower electricity sources. "Why should we use something that's more expensive and less safe?" — *Kyodo News*, March 1; and *Houston Chronicle*, Jan. 12, 2021

Kill Bill Challenges Missile Contracts

Legislation to kill the nuclear-armed sea-launched cruise missile (SLCM) was unveiled March 4 by Sen. Chris Van Hollen, D-Maryland and Rep. Joe Courtney, D-Connecticut. If passed, the bill would prohibit research and development, production, and deployment of the new submarine-launched missile. The two said that the Obama White House decided that a similar weapon was redundant and had it retired. In a related matter, Sen. Ed Markey, D-Mass., and Rep. Ro Khanna, D-Calif., urged President Biden, March 2, to cancel the SLCM-N program, and asked the president to "pause further development" of the Ground Based Strategic Deterrent — a planned \$264

billion replacement for today's 400 Minuteman III intercontinental ballistic missiles. In their letter, Markey and Khanna also urged Biden to adopt a "no first-use" doctrine for nuclear weapons, reminding the president that "there is no such thing as a winnable nuclear war." — *Defense News*, March 4, 2021

Bomb Test Blowback

Winds from the Sahara Desert blew north over Spain, France, the UK, and Ireland in February, carrying tons of the desert's dust. The dust, heavy enough in places to tint the sky orange, caused a measurable spike in atmospheric radiation, and after investigating the French Association for Control of Radioactivity in the West (ACRO) announced that the dust is literally radioactive blow back from France's colonial Cold War-era nuclear bomb tests. In 1960, France began detonating nuclear weapons above- and under-ground in the Algerian Sahara, contaminating local populations, the surrounding desert, and the French troops assigned to the experiments. (It detonated another 193 nuclear weapons on French Polynesia.) ACRO researchers gathered some of the dust from car windshields and its lab analysis found cesium-137, a radioactive isotope not found in nature but produced in great quantities by nuclear weapons blasts. How much was inhaled or ingested across Europe is unknown. ACRO said in a statement, "This radioactive pollution — still observable at long distances 60 years after the nuclear fire — reminds us of ... perennial radioactive contamination in the Sahara for which France bears the responsibility." — *Guardian*, Mar. 9; IFL Science online (UK), Mar. 4; and *Euronews.com*, March 1, 2021

Kings Bay Plowshares 7 Sentencing Update

Nearly four years after their heroic nuclear disarmament action, five of the KBP7 defendants have been sentenced and five are serving sentences. Last October Fr. Steve Kelly was sentenced to 33 months incarceration (he has been imprisoned since the 2018 action), three years of supervised release and restitution in the amount of \$33,501 (shared with other defendants); and Patrick O'Neill was sentenced to 14 months in prison, with the same probation and shared restitution. Carmen Trotta and Clare Grady were sentenced in a November hearing conducted by video conference. Carmen was given 14 months, and Clare was given "one year and one day." Due to being a cancer survivor and a having a diagnosis of Lyme disease, Grady may be required to serve only half a year with credit for time already served. Martha Hennessy, was sentenced to 10 months incarceration. Martha, Carmen, and Clare received the same three years supervised probation and restitution.

Mark Colville has refused to waive his right to appear in open court, so has been granted a delay until Covid restrictions are lifted. He is scheduled for sentencing on April 9. Liz McAlister has already completed time served (17 months). Carmen and Martha both reported to federal prisons to begin their sentences Dec. 14, 2020. Patrick began his 14-month sentence on Jan. 14, and issued a statement that said in part, "I'm going in there with hope. There's cause for optimism right now." Clare started her sentence on Feb. 10, 2021. — To write the resisters, follow this link for addresses and instructions about mail restrictions: <http://www.nukeresister.org/inside-out/>; or <https://kingsbayplowshares7.org/>

UK Base Would Dump 50 Times More Waste

The British Navy is being condemned for planning to increase up to 50 times its discharges of radioactive waste into the ocean from its giant submarine base near Helensburgh, Scotland. The Ministry of Defense has asked to increase the dumping as it plans to expand the number of submarines and nuclear weapons stationed at its Faslane and Coulport bases. The liquid radioactive waste comes from the reactors that drive submarines, and from the processing of their nuclear warheads. The waste would be discharged using a proposed new pipeline.

Proposed discharges of radioactive cobalt-60 — one of the main radioactive wastes from submarine reactors — are projected to be 52 times higher than the average annual discharges over the last six years. The Navy projects annual discharges of radioactive tritium to be 30 times higher than discharges in 2018.

The Scottish Campaign for Nuclear Disarmament accused the military of endangering the population it's supposed to protect. "There is no safe dose of radiation for a pregnant mother or an infant. The local harms caused by weapon systems make a nonsense of defense," said campaign chair, Lynn Jamieson. "Increases in radioactive discharges at Faslane are unacceptable," she said.

Faslane houses four nuclear-powered and nuclear-armed *Vanguard* class submarines — which carry Trident missiles "leased" from the United States — a nuclear-powered *Trafalgar* class sub, and three new nuclear-powered *Astute* class subs. Four new *Astute* class subs are scheduled for the Clyde Naval Base, and in the 2030s may include a fleet of new *Dreadnought* class submarines armed with Trident missiles. — *The Ferret* (Scotland), March 1; and Scottish Campaign for Nuclear Disarmament, Feb. 19, 2021

Unpopular Missile Project Saved by Profiteers

Congressional plans for buying 400 new land-based intercontinental ballistic missiles (ICBMs) have been slammed by such centrist groups as the Bloomberg News' editorial board, the Union of Concerned Scientists, the Arms Control Association, Defense News, the Bulletin of the Atomic Scientists, and former Secretary of Defense William Perry's think tank. How does the program survive? An answer comes from the Center for International Policy's Arms and Security Program' February 9 report, "Inside the ICBM Lobby: Special Interests or the National Interest?" The report details the enormous sums spent by military contractors on lobbying and campaign contributions to influence senators from states that host ICBM bases or major ICBM development projects. Capitol Hill's "ICBM Coalition" — from Montana, North Dakota, Utah, and Wyoming — are the beneficiaries that keep voting for a nuclear weapons program although, as report author William Hartung points out, there is "no militarily sound reason to build a new ICBM." Among the report's major findings:

- Northrop Grumman [which was awarded a \$13.3 billion development contract Sept. 8, 2020] and its major subcontractors have given \$1.2 million to the current members of the Senate ICBM Coalition since 2012, and over \$15 million more to members of key Congressional committees that have a central role in determining how much is spent on ICBMs.
 - The top 11 contractors working on the new ICBM spent over \$119 million on lobbying in 2019 and 2020 and employed 410 lobbyists.
- Center for International Policy, Arms and Security Program, March 9, 2021

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