Savannah River Site Watch

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https://srswatch.org/
Columbia, South Carolina
Nuclear News Update
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News release posted here on SRS Watch website: https://srswatch.org/wp-content/uploads/2020/11/SRS-Watch-on-strontium-to-US-on-Pacfic-Heron-Nov-11-2020.pdf

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Ship Carrying Radioactive Waste (Stronium-90) from France to Arrive in Charleston, SC around Nov. 16; Three U.S.-Supplied Strontium-Bearing Electricity Generators to be Trucked to Nevada to DOE Nuclear Waste Dump; No Explanation Given as to Why France Won't Deal with the Waste

Columbia, SC – A ship from France carrying highly radioactive strontium waste is soon to arrive in the port of Charleston, South Carolina, where the containers with the material would be offloaded and trucked to Nevada for disposal.

The British-flagged Pacific Heron departed France on November 5 and is estimated to arrive in Charleston on November 16, according to a French-language news release about which the public interest group Savannah River Site Watch (Columbia, South Carolina) was alerted. SRS Watch has observed various nuclear cargo ships entering and leaving the port of Charleston, including ships carrying weapon-grade plutonium so would not be surprised if the ship's arrival happens at night.

According to a news release by the French company Orano TN (formerly Areva, the company that bungled the plutonium fuel project at the U.S. Department of Energy's Savannah River Site), the highly unusual shipment consists of three radioisotope thermoelectric generators (RTGs) that used the heat-producing radioisotope strontium-90 "to produce electricity to power offshore beacons for research purposes." The news release states that they would be taken to a "storage site" in Nevada but it's more likely that the RTGs could be dumped in Nevada.

It does not appear that the U.S. Department of Energy has said anything about the shipment. It is also not known if the States of South Carolina and Nevada have been notified about the shipment. Savannah River Site Watch left a message for Nevada's Nuclear Waste Project Office to make sure that the State of NV is aware of the shipment.

Based on past nuclear shipments, the Heron would arrive at the special non-commercial dock up the Cooper River on the military facility Joint Base Charleston. The RTGs, which pose a radioactive exposure risk if the shielded strontium capsules were breached, would be quickly off loaded and likely taken to

the nuclear waste disposal facility (Radioactive Waste Management Complex) at the Nevada National Security Site north of Las Vegas, NV, which consists of a ground-level burial ground. The site is where 928 U.S. nuclear weapons tests were conducted.

According to the ship-tracking site www.marinetraffic, the Heron's arrival in Charleston is estimated to be on Monday, November 16: "The vessel departed from CHERBOURG, FR on 2020-11-05 15:20 LT (UTC +1) and is currently sailing at 13.6 knots with Southwest direction heading to CHARLESTON, US with reported Estimated Time of Arrival at 2020-11-16 07:00 LT (UTC +1) local time (in 5 days, 16 hours)."

"We have observed nuclear cargo ships acting in contradiction to shipping norms by turning off their running lights and locator beacons when entering the Charleston harbor and the Pacific Heron must not conduct itself in this unsafe manner," said Tom Clements, director of SRS Watch. "The Pacific Heron must follow all shipping regulations and, given the hazardous nature of the cargo, request an escort by the U.S. Coast Guard," added Clements.

It is unknown how much strontium-90 is in the RTGs but likely tens of thousands of Curies. The half-life of strontium-90 is 29 years and it will be harmful for 10 half-lives, or about 300 years. Strontium-90 emits beta radiation, which is particularly harmful if swallowed or injested as it acts like calcium in the body and seeks out bone tissue. Handling of the RTGs in Nevada must preclude dumping in the ground.

The Orano news release claims that the RTGs are being returned to the U.S., implying that they could have been fabricated by the U.S. Department of Energy (or its precursor, the Atomic Energy Commission) and are owned by DOE. The contract between DOE is not public, but it should have contained a provision that the RTGs would have been disposed of in the country that received the beneficial use of them (France), which has full capability to manage the material.

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Notes:

Photo of Pacific Heron at dock in home port of Barrow-in-Furness, England, by Martin Forwood, Cumbrians Opposed to a Radioactive Environment (CORE), Feb. 1, 2016 – special to SRS Watch:

https://srswatch.org/wp-content/uploads/2020/11/Pacific-Heron-Barrow-in-Furness-by-Martin-Forwood-CORE-Feb.-2016.jpg

News release, **"Orano retourne des matières nucléaires vers les Etats-Unis," 5 November 2020:**

https://www.orano.group/fr/actus/actualites-du-groupe/2020/novembre/orano-retourne-des-matieres-nucleaires-vers-les-etats-unis

https://www.nnss.gov/pages/programs/RWM/WasteManagement.html

Power from Radioisotopes, Atomic Energy Commission, see page 21 for description of RTGs for navigation buoys, 1963:
https://www.osti.gov/includes/opennet/includes/Understanding%20the%20Atom/Power%20from%20Radioisotopes%20V.3.pdf

Information by DOE's Pacific Northwest national Lab on use of strontium-90 in RTGS:
https://radioisotopes.pnnl.gov/isotopes/stronium-90.stm