

***News from Beyond Nuclear * Canadian Coalition for Nuclear Responsibility
Coalition for a Nuclear-Free Great Lakes * Northwatch * Nuclear Information
and Resource Service * Savannah River Site Watch***

For Immediate Release, May 15, 2017

Contact:

Gordon Edwards, Canadian Coalition for Nuclear Responsibility (CCNR) [\(514\) 839 7214](tel:5148397214); Kevin Kamps, (240) 462-3216, kevin@beyondnuclear.org; Michael Keegan, Coalition for a Nuclear-Free Great Lakes, (734) 770-1441, mkeeganj@comcast.net; Terry Lodge, environmental coalition attorney, tjlodge50@yahoo.com; Brennain Lloyd, Northwatch, northwatch@northwatch.org, office [705 497 0373](tel:7054970373) cell [705 493 9650](tel:7054939650).

**Highly Radioactive Liquid from Canada Raises Concerns about
Worker Safety at the Savannah River Site**

Hotspot on Unloading Equipment Reveals Failed Radiation Shielding

Savannah River Site (SRS), South Carolina— According to a U.S. federal agency document just released on Friday May 12, the first of 100-150 truckloads of highly radioactive liquid waste from Canada has been unloaded at the Savannah River Site, and the transfer container has not provided fully adequate radiological shielding to protect workers.

A document published by the Defense Nuclear Facilities Safety Board (DNFSB), a U.S. federal agency, has confirmed that the first truck shipment of “Target Residue Material (TRM),” or “liquid Highly Enriched Uranium (HEU),” arrived from Chalk River Nuclear Lab, Ontario, Canada at the U.S. Department of Energy’s (DOE) H-Canyon in SRS, the week ending April 21. (The document was not made publicly available until May 12, however).

The DNFSB document went on to report that “Each container of HEU is pulled from the shipping cask into a shielded “pig” that provides radiological shielding for H-Canyon personnel. After loading a pig, radiological protection (RP) identified an unexpected hotspot on the side of the pig indicating that the pig was not providing adequate radiological shielding.”

([As defined at the online glossary of the U.S. Nuclear Regulatory Commission](#), “pig” is “A colloquial term describing a container (usually lead or depleted uranium) used to ship or store radioactive materials. The thick walls of this shielding device protect the person handling the container from radiation. Large containers used for spent fuel storage are commonly called casks.”)

The DNFSB document was posted online on May 12 at:

<https://www.dnfsb.gov/sites/default/files/document/11571/Savannah%20River%20Week%20Ending%20April%2021%202017.pdf>

The document is also reproduced below, at the end of this press release.

The unprecedented truck shipments of high-risk, highly radioactive liquid waste have stoked controversy and concern since the proposal was first revealed four years ago, leading to [a federal lawsuit by an environmental coalition](#) last August, ending with a federal judge's ruling in favor of DOE in February. The coalition (which includes Beyond Nuclear, Nuclear Information and Resource Service, SRS Watch, Citizens for Alternatives to Chemical Contamination, Lone Tree Council, Sierra Club, and Environmentalists, Inc.), represented by Toledo attorney Terry Lodge, and Washington, D.C. attorney Diane Curran, sought an environmental assessment or impact statement prior to shipments. However, U.S. District Court Judge, Tanya S. Chutkan, ruled DOE could proceed with the shipments even without the stronger environmental reviews. Up to 150 truck shipments are scheduled over the next four years, to transport 6,000 gallons of highly radioactive liquid waste from Chalk River, Ontario to SRS, South Carolina, passing through several states in between.

The most likely border crossing is at the Peace Bridge in Buffalo, New York, and at Thousand Islands Bridge, New York. This has prompted U.S. Representative Brian Higgins (Democrat-Buffalo), and U.S. Senator Kirsten Gillibrand (Democrat-New York), to express opposition. Higgins' bill, demanding a Homeland Security review of the shipments, passed the U.S. House last year.

“The unfortunate result of the court's failure to require an environmental safety review is that, to reduce the substantial hazard of these shipments, every step of this unprecedented and unnecessary project must be carried out flawlessly: loading, transport, unloading, storage and reprocessing. But the very first delivery has exposed a substandard, flawed piece of equipment that could well threaten worker safety. We demanded a genuine scientific assessment of the wisdom of moving this highly radioactive liquid at all, but DOE swore that its containment, transport, and handling systems, structures, and components would provide adequate safety. This incident gives the lie to the court's unsupported ruling that all bases were covered,” said Terry Lodge, one of the attorneys who sought to halt the shipments in court.

“The labels “Target Residue Material (TRM),” or “liquid Highly Enriched Uranium (HEU),” obscure the fact that this liquid waste is highly radioactive,” said Gordon Edwards, President of the Canadian Coalition for Nuclear Responsibility, and an expert witness in the coalition's lawsuit. “As I testified in court filings, a very small amount – just a few liquid ounces – of this highly radioactive stew of fission products such as Cesium-137, if spilled, could render an entire large city's drinking water supply unsafe to drink,” Edwards said.

“Our proposed alternative to these high-risk truck shipments to South Carolina, and the unnecessary reprocessing at H-Canyon and *de facto* permanent storage of highly radioactive waste at SRS, is simply to down-blend and solidify the liquids in Canada, as had been done for years at Chalk River,” said Brennain Lloyd, project coordinator of Northwatch, an Ontario group that has warned about the risks of such transportation, and raised concerns about cross-border trade and traffic in radioactive wastes.

Down-blending is the process of mixing non-fissile Uranium-238 into concentrated fissile Uranium-235, thereby turning nuclear weapons-usable Highly Enriched Uranium (HEU) into non-proliferative Low Enriched Uranium (LEU).

“DOE’s recent approval for Indonesia to do on-site down-blending and solidification of nearly identical liquid HEU, undermines DOE’s assertion that Chalk River must ship to SRS as a nonproliferation safeguard,” said Michael Keegan, coordinator of Coalition for a Nuclear-Free Great Lakes, based in Monroe, Michigan. “We’re concerned DOE is simply trying to keep its dirty, dangerous, expensive, and unnecessary reprocessing facilities at H-Canyon on life support,” Keegan added.

“The shipments are not being done for nuclear nonproliferation reasons as DOE claims, but rather represent nuclear dumping by Canada, and profit-making by DOE, given the \$60 million payment for the scheme, all of which should stop,” said Tom Clements, SRS Watch director.

Today, SRS Watch, based in Columbia, South Carolina, filed a "FOIA Request for any Documents or Reports Related to Receipt, Off Loading and Handling of Canadian Liquid High-Level Waste at H-Canyon, Especially as it Applies to Radiological Shielding Problems" (see <https://tinyurl.com/m2ht8po>).

Last month, [the Iroquois Caucus and Anishinabek Nation issued a joint declaration, and wrote the Canadian Prime Minister](#), likewise urging down-blending and solidification of the highly radioactive liquid wastes on-site at Chalk River, as a safer alternative to trucking them through the First Nations’ Great Lakes, St. Lawrence River, and other territories. [The Iroquois Caucus and Anishinabek Nation had first condemned the highly radioactive liquid waste truck shipments across their territories in February.](#)

The discovery of an unexpected radioactive “hot spot” in one of the SRS transfer pigs may be the result of a manufacturing defect or flaw.

It follows other equipment defects, malfunctions, and failures involved in highly radioactive waste storage, handling and transfer activities at Chalk River and SRS. Multiple incidents have happened in the last two years, all directly or indirectly connected with the same type of transport cask, the Nuclear Assurance Corporation-Legal Weight Truck (NAC-LWT) cask, being used in the highly radioactive liquid waste shipments.

In October 2015, the bottom of a “caddy” used to transfer solid irradiated nuclear fuel unexpectedly failed, dropping open and sending the highly radioactive spent nuclear fuel rods to the bottom of a high-level waste storage pool at Chalk River. The failure of the caddy was caused by poor welds, a manufacturing defect that was also evident on a number of other caddies designed to serve the same purpose. These caddies are manufactured by the same company (NAC) that makes the transport casks, and are part of the equipment that goes with the NAC-LWT cask.

In April 2016, a grapple crane at SRS, used to lift a “basket” of solid, highly radioactive spent nuclear fuel for emplacement in a NAC-LWT cask, suddenly failed, dropping the basket with its radioactive contents. Again, the grapple crane that failed was part of the equipment that accompanies the NAC-LWT cask.

“This latest incident of inadequate radiological protection at SRS must be added to multiple other safety-related incidents that have raised red flags, calling into question the competence of the American and Canadian nuclear agencies and contractor firms involved,” said Kevin Kamps of Beyond Nuclear. “These have included [quality assurance violations with the waste shipping containers](#). The unprecedented liquid nature of these current highly radioactive waste shipments only adds to the risks during handling, transport, transfer, and storage,” Kamps added.

“Communities on both sides of the border and along the routes have raised repeated concerns and opposition to these unnecessary, unprecedented, intensely radioactive nuclear shipments, and are calling for a halt to these and other proposed nuclear waste transports between the U.S. and Canada,” stated Diane D’Arrigo of Nuclear Information and Resource Service (NIRS), one of the groups that challenged the shipments in court.

--30--

ADDITIONAL BACKGROUND INFORMATION

(1) DNFSB memo, posted online May 12, 2017 at <https://www.dnfsb.gov/sites/default/files/document/11571/Savannah%20River%20Week%20Ending%20April%2021%202017.pdf>:

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 21, 2017

TO: S. A. Stokes, Technical Director

FROM: M. T. Sautman and Z. C. McCabe, Resident Inspectors

SUBJECT: Savannah River Site Resident Inspector Report for Week Ending April 21, 2017

Target Residue Material (TRM): *H-Canyon personnel started processing the first*

shipment of liquid Highly Enriched Uranium (HEU) this week. Each container of HEU is pulled from the shipping cask into a shielded “pig” that provides radiological shielding for H-Canyon personnel. After loading a pig, radiological protection (RP) identified an unexpected hotspot on the side of the pig indicating that the pig was not providing adequate radiological shielding. RP labeled the hotspot before H-Canyon personnel relocated the pig so the hotspot would be facing the wall. H-Canyon personnel did not identify any similar issues on the other pigs and are planning to use the one spare pig for future evolutions. All of the containers have been removed from the cask and H-Canyon personnel have begun transferring the HEU into H-Canyon for processing.

(2) *Radioactive Roads: Highly Radioactive Liquid Transport from Chalk River, Ontario, to SRS, South Carolina*, March 2017, by Canadian Coalition for Nuclear Responsibility, March 2017 – with cask photos and analysis of radioactive contents of liquid HLW (see http://www.ccnr.org/TRM_Transport_CRL-SRS.pdf)

(3) See posts regarding these highly radioactive liquid waste truck shipments from Chalk River to SRS, and related subject matter, at: <http://www.beyondnuclear.org/waste-transportation/>