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Waste Control Specialists LLC's Consolidated Interim Spent Fuel Storage Facility Project

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Interim Storage Partners LLC's Consolidated Interim Spent Fuel Storage Facility

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General Comment

Risks of Routine or Incident-Free Shipments Nonetheless Being Like Mobile X-ray Machines That Cant Be Turned Off, and Risks of Externally Contaminated Shipments

Routine or incident-free shipments of irradiated nuclear fuel carry health risks to workers and innocent passers by because it would take so much radiation shielding to completely hold in the gamma radiation, being emitted by the highly radioactive waste, that the shipments would be too heavy to move economically.

NRCs regulations allow for up to 10 millirem per hour (mR/hr) of gamma radiation to be emitted, about six feet (two meters) away from a shipping casks exterior surface. Thats about one to two chest X-rays worth of gamma radiation, per hour of exposure. Since the radiation dissipates with the square root of the distance, this means that NRCs regulations allow for up to 200 mR/hr, at the surface of the casks exterior. Thats 20 to 40 chest X-rays worth of gamma radiation, per hour, which NRC allows to stream out, right at the casks surface.

NRC has done a cost-benefit analysis and deemed these exposure levels acceptable or permissible. (Permissible or acceptable should never be confused with safe or harmless exposures to 200 mR/hr, or even 10 mR/hr, still carry health risks.

Six feet away could affect a person standing beside a train track, as the train goes by. Some real world examples of this situation include the Takoma Metro Station near Takoma Park, Maryland the Red Line Metro Station platform is right beside the CSX railway, which is targeted for trains to haul irradiated nuclear fuel from the Calvert Cliffs, MD and North Anna, VA nuclear power plants, such as bound for WCS, TX.

Although further than six feet away, residences located immediately adjacent to these same CSX rail lines in Tacoma, D.C. mean that those living there could well be exposed to gamma radiation, although at a lower dose rate (again, the dose rate decreases inversely with the square root of the distance). However, residents can be expected to be present in their homes a lot more often than commuters standing on a Metro platform

including during sleep hours, when trains carrying irradiated nuclear fuel could still go by. And of course, residents along these tracks, would also be commuters standing on the platform, leading to multiple exposures in their daily (and nightly) lives, for years on end during a WCS shipping campaign.

However, when, in 2003, the Big Rock Point reactor pressure vessel (albeit so-called low level radioactive waste, it still serves as a cautionary tale) was shipped by heavy haul truck into Gaylord, Michigan to be loaded onto a train, for its shipment by rail to Barnwell, South Carolina, to be buried in a ditch, neither the nuclear utility, Consumers Power, nor the NRC (nor any other federal or state agency), nor local law enforcement, created a security or safety or health perimeter around the shipping container. As if it were a parade, onlookers were allowed to simply approach the shipping container, walk right up to it, and even touch it. In fact, a parade would probably have had better health, safety, and security precautions in place! (See 2003 written entries, as well as a photo, about this and other incidents that occurred during this single shipment, posted online at: <https://web.archive.org/web/20151211005008/http://www.nirs.org/radwaste/hlwtransport/mobilechernobyl.htm>). WCS would involve 4,000 irradiated nuclear fuel shipments into the Andrews, TX parking lot dump; and an equal number out, if the waste ever were to leave.

Areva a key partner in the WCS proposal at its home base in France, experienced just such a plague or epidemic of externally contaminated shipments. A full 25% to 33% of Arevas irradiated nuclear fuel shipments, into its La Hague reprocessing facility, were externally contaminated, for years on end, above permissible levels. This amounted to many hundreds of individual shipments, contaminated above permissible levels, over the course of several years. On average, the shipments were giving off radiation dose rates 500 times the permissible level; in one instance, a shipment was emitting radiation 3,300 times the acceptable level.

Environmental watchdogs and journalists revealed this contaminated shipment scandal. See the WISE-Paris write up, Transport Special - Plutonium Investigation n6/7, posted at <http://www.wise-paris.org/> under Bulletins.

But such externally contaminated shipments have happened in the U.S., as well. Halstead documented this in a report prepared for the Nevada State Agency for Nuclear Projects in 1996. It is entitled Reported Incidents Involving Spent Nuclear Fuel Shipments, 1949 to Present. 49 surface contamination incidents are documented. This report is posted online at: <http://www.state.nv.us/nucwaste/trans/nucinc01.htm>.