

Company plans to dump a million gallons of radioactive water into the Hudson River

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On February 2, Holtec International, the company charged with decommissioning the Indian Point nuclear facility, reported that it plans to discharge approximately one million gallons of radioactive wastewater into the Hudson River beginning as soon as August. The Indian Point electricity generating station is located in Buchanan, New York, on the eastern shore of the river, roughly 25 miles (40 kilometers) upstream from New York City. It was first brought on line in 1962 and was finally shuttered in 2021.

The announcement was made at a meeting of the Indian Point Decommissioning Oversight Board and has raised strong objections from environmental advocacy groups and residents. The Hudson River is already a federally designated Superfund cleanup site due to the dumping of carcinogenic PCBs (polychlorinated biphenyls) by General Electric decades ago from facilities at Hudson Falls and Fort Edward, NY, upriver from Buchanan.

Dealing with the radioactive water, a product of the process to keep the nuclear reactor from overheating, is just one aspect of the overall decommissioning procedure. Spent fuel rods, which contain plutonium and uranium, and other components, will remain dangerously radioactive for hundreds of millennia. These must be stored on site in effective perpetuity unless an alternative long-term storage facility is created to which they could be transported, merely “kicking the can down the road.” No such “permanent” storage location has yet been created despite 45 years of political finger-pointing. The transportation itself would present dangers, as illustrated by the recent derailment and resulting spill of toxic chemicals in East Palestine, Ohio.

The wastewater is contaminated with tritium, a radioactive isotope of hydrogen, which emits beta

radiation (electrons) as it decays. While not as dangerous as the fuel rods, in large quantities it can cause cancer when inhaled or ingested. Tritium has a relatively short half-life, 12.33 years. Half-life is the length of time over which half of a given quantity of radioactive material will decompose, in this case into harmless helium.

An effective decontamination strategy would be to simply keep the wastewater contained on site to allow the natural decay process to proceed. Retention for approximately 25 years would reduce the quantity of tritium by 75 percent, making release into the environment less problematic. After 60 years, 96.4 percent of the stored tritium would have decayed. The NRC allows 60 years for decommissioning and spent fuel rods can remain on site for longer. However, that would require ensuring that containment was maintained throughout that time to prevent leakage into the surrounding groundwater, entailing long-term monitoring, maintenance and associated expense. Leaks in two containment tanks at the facility have already been detected. It should be noted that the tritium standards have not been updated for 50 years and may be out of date.

Given that and the need for onsite storage of the more long-lived radioactive materials, the question is raised: what is the need for disposal of the wastewater into the Hudson at this time, since curation of the Indian Point facility must be maintained in any case? A company spokesperson stated that in-river disposal is the “best option” available. This is eerily reminiscent of Norfolk Southern’s justification for the “controlled burn” of toxic materials in the derailed train at East Palestine. In both cases, containment of cost is evidently the primary consideration.

The New York City metropolitan area, through which

the Hudson River flows, has a population of over 20 million people.

Under existing federal regulations, nuclear power plants are allowed to discharge contaminated cooling water into adjacent rivers during the normal course of operation. Therefore, Holtec contends that it is within its rights to undertake the proposed in-river disposal. The long-term effects of such actions are unknown.

The company is the recipient of a 12-year contract to undertake decommissioning of the plant, which had been operated by Consolidated Edison (ConEd) and later by Entergy during its use life. The Indian Point decommissioning trust fund amounts to approximately \$2.4 billion. Holtec claims it can complete the job for \$2.3 billion, indicating an incentive to cut costs, which are being borne by utility ratepayers. Responsibility for the long-term onsite storage of the spent fuel rods and other contaminated materials beyond the expiration of Holtec's contract has not been resolved.

The federal Nuclear Regulatory Commission (NRC) contends that the tritium would become so highly diluted once discharged into the river as to create minimal potential harm. However, given the existing toxic PCB contamination and an unknown number of other hazardous materials dumped into the river over several centuries of industrial activities, the cumulative impact of multiple toxic materials on humans and other living organisms in and adjacent to the river is unknown.

The environmental advocacy group Riverkeeper issued a statement on February 10 urging that, "It's time to draw the line against using the Hudson as a dumping ground for tritium, a radioactive isotope found in the wastewater."

So, again, what's the rush? The obvious explanation is that Holtec wants to take the money and run, avoiding any long-term responsibility. With regard to the wastewater, the effective decay of the tritium into helium requires at least 25 years, while Holtec's decommissioning contract is only for 12.

Beyond the immediate concerns with Indian Point, the larger issue rests with the more than 900,000 metric tons of highly radioactive nuclear waste in the US alone that has no permanent repository.

When the generation of electricity by commercial nuclear facilities was initially being promoted back in the 1950s, the claim was made by the then-chair of the

Atomic Energy Commission (AEC) Lewis Strauss that it would be "too cheap to meter." In other words, virtually free electricity would be available.

The cost of dealing with the resulting radioactive waste was ignored where short-term profits were to be made. Even now, when the problem of dealing with the huge volume of long-lived toxic material is evident, no effective solution is available, and the profit motive offers only temporary "quick fixes" with their attendant dangers.

If the need for efficient, cost-effective and environmentally prudent sources of energy is to be met, it can only be accomplished under a socialist, planned economy under workers' control, not by private, profit-driven companies.



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