Lessons for U.S. Emergency Planning from Chernobyl and Fukushima

$^{131}$Iodine

Paul Gunter, Reactor Oversight Project
Beyond Nuclear
Radioactive iodine from nuclear accidents & sabotage

- $^{131}$ iodine radioactive half-life of 8 days
- Can be filtered out of containment venting at reactors to reduce uncontrolled radioactive releases to the environment
- Effective prophylactic protection of the thyroid gland is available to civil society with potassium iodide (KI)
The lesson was learned in 1979 at Three Mile Island.
The lesson relearned
April 26, 1986 and September 11, 2001
The lesson relearned
March 11, 2011 at Fukushima

100% containment failure rate for GE Mark I boiling water reactor containment system

Widespread population exposure to radioactive iodine and other radioactive isotopes
A Lesson Unlearned for the United States: NRC failure to act on flawed containments to require filtered containment vents

NRC Japan Lessons Learned Task Force recommends Order for Filtered Containment Vents on 31 U.S. reactors

Industry opposes on grounds of cost

Commission rejects requiring installation of radiation filters on containment vents
Japan requires Filtered Containment Vents
A Lesson Unlearned for the United States: NRC Failure to Act on Effective Prophylactic Protection with Potassium Iodide (KI)

As recommended by ATA,

Pre-distribution by direct delivery to every resident within the radius of 50-miles of nuclear reactors

Stockpiling hospitals, police stations and fire departments within a radius of 200-miles of nuclear reactors
Nuclear “Regulatory Capture”