Blue Ridge Environmental Defense League

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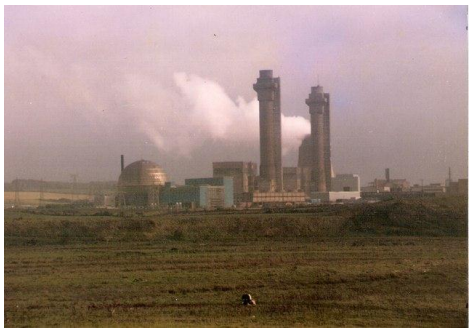
Memorandum

FROM: Louis A. Zeller, Executive Director
TO: BREDL chapters
Date: December 10, 2012
RE: Emergency Planning Zones for Nuclear Accidents

Federal emergency planning for nuclear power plants is inadequate. The radioactive contaminants from the nuclear accident last year in Japan affected air, water, soil and agricultural products over a much wider area than the Nuclear Regulatory Commission acknowledges. We are joining with residents living near existing and proposed nuclear reactors to call for improved public health and safety measures at nuclear power plants. Measures we recommend are:

1. Expand the radius of the Plume Exposure Pathway Emergency Planning Zone (EPZ) from a 10-mile radius to a 25-mile radius;
2. Establish a new 50-mile radius Emergency Response Zone, with more limited requirements than the EPZ;
3. Expand the radius of the Ingestion Pathway EPZ from the current 50 mile radius to a 100 mile radius; and
4. Ensure that emergency plans are tested to encompass initiating and/or concurrent natural disasters that may affect both accident progression and evacuation conduct.

Emergency planning should extend 100 miles from nuclear power plants. An IAEA report[i] on the Windscale nuclear accident states: ñEven as far as 100 miles away, levels of radioactivity in milk were nearly 40,000 picocuries per liter one week after the accident.ò This is over eight times the United States FDAôs action level of 4,600 picocuries per liter. The Windscale accident occurred in Great Britain and ranked at severity level 5 on the 7-point scale (see photo).[ii] (Fukushima was a 7). One of the major threats to public health was radioactive iodine-131, which is taken up by the human body and stored in the thyroid, causing cancer. In 2007 the increased incidence of thyroid cancer alone from the accident was estimated to be 240 cases.



Radiation spreads in unpredictable ways and can contaminate vast areas. Dave Lochbaum, of the Union of Concerned Scientists, when asked about the extent of radioactive contamination after Fukushima, said: ñContamination levels are not linear. Further away you don't necessarily get lower doses.ò[iii] He explained that prevailing winds and other factors determine which areas are affected and how much. For example, after the nuclear accident at Chernobyl, areas 100 miles from that plant had radiation levels higher than areas only 10 or 20 miles away.

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[i] *IAEA Bulletin Vol. 2, No. 5.* http://www.iaea.org/Publications/Magazines/Bulletin/Bull215/21502795459.pdf

[ii] This image was taken from the *Geograph* project collection. See this photograph's page on the Geograph website for the photographer's contact details. The copyright on this image is owned by Chris Eaton and is licensed for reuse under the Creative Commons Attribution-ShareAlike 2.0 license

[iii] Josie Garthwaite, *National Geographic News*, March 16, 2011 http://news.nationalgeographic.com/news/energy/2011/03/1103165-japan-nuclear-chernobyl-three-mile-island/