



Nuclear Free Local Authorities Steering Committee

information

NFLA Media Advisory - for immediate release, 27th October 2011

Fukushima's radiation emissions – has it been vastly under-estimated?

The Nuclear Free Local Authorities (NFLA) is writing to Energy Minister Chris Huhne, Chief UK Nuclear Inspector Mike Weightman and the Health Protection Agency to highlight recently published detailed, independent analysis which suggests the radiation release from the Fukushima disaster could be considerably higher than Japanese Government figures.

The analysis was recently published in the journal 'Atmospheric Chemistry and Physics', and is written by an international group of atmospheric scientists from across Europe and North America (1). The research, which is currently open for peer review, is one of the most extensive and comprehensive reports to quantify how much radiation were released from the Fukushima Daiichi plant.

The data comes from dozens of radiation monitoring stations around Japan and around the world, and it is backed-up with extensive global meteorological data.

The Japanese Government reported that the plant released 1.5×10^{16} of Caesium-137, which has a half-life of 30 years and is responsible for most of the long-term radioactive contamination from the plant. The wider international study though calculates the radioactive release of Caesium-137 to be 3.5×10^{16} , double the Japanese Government estimate and around half the release of the 1986 Chernobyl disaster. The reason given for the increase is that Japanese figures do not take into account data which is taken from outside Japan. Large quantities of radioactivity was released into the Pacific Ocean and eventually reached North America and Europe, and this is picked up in the study.

The study also points out that 'copious quantities' of Caesium-137 leaked out of spent radioactive fuel cooling ponds in the early days of the disaster, until they were doused with water. It also concludes that the short-lived radioactive isotope xenon-133 was leaking out of the plant following the earthquake and before the tsunami hit it. In its submission to the UK Fukushima nuclear safety review led by Chief UK Nuclear Inspector, the NFLA provided detailed research by independent marine pollution consultant Tim Deere-Jones highlighting similar concerns over higher levels of radioactivity leaking out of the plant and from the spent fuel cooling ponds in the initial days of the incident. The NFLA have also raised concerns around damage done by the earthquake alone, prior to the tsunami hitting the plant. (2)

One of the most concerning outcomes of the newly published research study is that the accident could easily have had a devastating effect on the people of the huge city of Tokyo. It notes that on March 14th, the prevailing winds moved back towards shore, bringing huge clouds of Caesium-137 over large areas of highly populated areas. It was fortunate that dry weather over this period occurred – if it had rained then large numbers of people could have been affected, as took place across swathes of northern Europe following the Chernobyl disaster in 1986.

NFLA Vice Chair Councillor Ralph Pryke comments:

"This startling new study shows to me that we still do not know all the key facts from the Fukushima incident. This new model suggests the Japanese Government's figures for radioactivity release from Fukushima are only part of the story and that there could have been a much larger release over a far wider area. I am particularly alarmed that only good weather helped stop a significant radiation release that could have potentially affected tens of millions of people. We will notify the UK

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Government, nuclear and health regulatory bodies to this important piece of research. It highlights to me that it is still far too early for Mike Weightman to have published a final nuclear safety report as worrying statistics like this study comes to light. Above all, it shows the clear risks of nuclear power and how lucky we are that this incident was not the catastrophe that it seems it could easily have been.”

Ends

Further information: Sean Morris, NFLA Secretary 07771 930196.

Notes for editors:

- (1) The research is profiled in the latest edition of the online magazine ‘Nature News’ and was posted on the 25th October. It can be downloaded from:
<http://www.nature.com/news/2011/111025/full/478435a.html>
The full report can be downloaded from the journal ‘Atmospheric Chemistry and Physics’:
<http://www.atmos-chem-phys-discuss.net/11/28319/2011/acpd-11-28319-2011.html>
- (2) The NFLA submission on marine pollution issues to the Weightman nuclear safety review can be found at:
http://www.nuclearpolicy.info/docs/consultations/NFLA_Weightman_submission_annex.pdf

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