

ADDCOR: AN ATMOSPHERIC DISPERSION AND DOSIMETRY CODE
FOR OPERATORS AND REGULATORS

M.C.E. Petersen and G.H. Clark
Lucas Heights Research Laboratories
Lock Mail Bag No. 1, Menai 2234, N.S.W., Australia

ABSTRACT

A general purpose atmospheric dispersion and radiation dosimetry code is described. This code provides a ready means for estimating the degree of compliance of radiation doses received by members of the public and others with the ICRP dose limits. The code is especially applicable to the normal atmospheric releases from a nuclear establishment with a diverse and varying range of activities. It can also be applied to accidental releases.

Major features of the code are that it

- provides for a number of sources and receptor locations which can be readily varied;
- provides hourly nuclide release rates from summary input data with hourly meteorological data;
- contains an extensive library of the dose conversion factors;
- allows a variety of exposure routes and individual habits to be included.

The code can also be used for estimating collective doses. Finally, the code has been written in FORTRAN 77 for portability and has been highly structured to aid approval reviewing by authorizing bodies.

An illustration of the code is included.