

SYSTEM SET UP BY THE C.E.A. GROUP FOR MONITORING
ENVIRONMENTAL RADIOACTIVITY IN REAL TIME

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ABSTRACT

The Tchernobyl plant accident has led the C.E.A. group to re-examine its own network for monitoring environmental radioactivity and to define, on a national level, an organization that would, in the case of a significant radioactive pollution, enable information to be collected and employed to establish diagnostics and advise authorities so that they can act and inform.

The following points are treated in this paper :

- the general structure adopted : information from all French nuclear centers is regrouped and centralized at a control and decision making post conferred the responsibility of establishing a synthesis so that appropriate measures can be taken. The communication network is organized with the different nuclear centers at its nodes. The system is therefore completely interactive,
- the structure of the real time monitoring stations located around each of these centers,
- the complete characteristics of the materials used and the specific data acquisition and handling systems developed,
- the operating modes employed in order to assure the quality of the materials used and their correct operation,
- complementary equipment selected for various samplings to be batch treated afterwards in the laboratory,
- the equipment of various nuclear analysis laboratories integrated into the network,
- meteorological measurements made in real time at the various different centers,
- the cost of a monitoring system of this kind developed and realized by the C.E.A. group.