

90968

20816

# MONITORING URANIUM DUST CONCENTRATION IN A MINING CONCENTRATE CONVERSION PLANT INTO UF<sub>4</sub> AND UF<sub>6</sub>

COMURHEX is a plant for converting mining concentrates into UF<sub>4</sub> and UF<sub>6</sub>. The operations are carried out in various facilities. The atmosphere of these shops is monitored daily using APA's (Aerosol Sampling Apparatus) placed in selected locations depending upon the work stations used by the operators.

The samples are measured daily; a first count is made immediately after sampling and a second one three days later. The first and second counts are plugged into a computer program developed within Comurhcx-Malvesi. This program enables the data in Bqcc/m<sup>3</sup> and Bqβ/m<sup>3</sup> from the APAs to be displayed for each shop on individual diagrams and for the whole of the APAs of the plant on a single diagram.

Guide values are reference values corresponding to the usual values for the shop. They are indicated on the diagram for immediate comparison with the present values.

It is possible to display each APA over a set period. The period that is displayed by default is the last 30 days. Incidents and gradual drifts may thus be identified immediately.

Each incident may be commented and the commentary introduced into the program. A very quick access to them makes querying given events easy.

This program allows, from a medical standpoint, to target urinary uranium analyses on workers: any increase of the APA values over a given threshold and/or a certain period of time results in another urinary uranium analysis. These analyses are done on top of the systematic analyses performed periodically.

This program comes also in support of the operators for the maintenance of their shop. It allows the facilities where repetitive incidents occur to be pinpointed much more easily and, better still, to locate those where a gradual drift occurs.

For Comurhex, this program is a tool which makes the medical surveillance of workers easier and helps the operators in the maintenance and management of their shop.