International Symposium on Uranium Raw Material for the Nuclear Fuel Cycle: Exploration, Mining, Production, Supply and Demand, Economics and Environmental Issues - IAEA CN-216

Contribution ID: 122

Type: Oral

## Continuing education in radiation protection in the nuclear fuel cycle: The case of Nuclear Industries of Brazil

Tuesday, 24 June 2014 17:30 (30 minutes)

This paper describes the pedagogical and technical concept that guided training in radiation protection implemented by the Indústrias Nucleares do Brasil (INB) to maintain the competence of its technical staff to perform activities with exposure to radiation, the staff responsible for the supervision of this work and as a form of dissemination of knowledge to the staff not involved in the use of ionizing radiation.

The groups of workers to be trained are here described, as well as the level of training, the frequency and types of training, the profile of trainers, the training programs, the forms of assessment and recording of training. It also describes the first general training performed in 2004. After this initial training no other general training was realized, and the option was to train small groups of workers, to avoid stopping the production as it occurred when general training was executed.

The overall training was conducted in three units: the Uranium Concentration Unit (URA) under production in the city of Caetité, state of Bahia, the Ore Treatment Unit (UTM) undergoing decommissioning at Poços de Caldas, state of Minas Gerais and the Unit of Heavy Minerals (UMP), at Buena, state of Rio de Janeiro. In the initial training at URA 79 workers were trained, distributed in 6 classes (average of 13 students per class); each class had nine hours training and the grades obtained ranged from 7.5 to 10. At UTM, 200 employees were trained distributed in 9 classes (average of 22 students per class); their notes ranged from 8.8 to 10. Finally, at UMP 151 employees were trained, in 5 classes (average of 31 students per class); their grades ranged from 8.6 to 9.0. That year, a total of 180 hours were spent for training 430 employees, with no effective rebuke.

Currently employees are trained when they arrive at their Units, and all along the year in small classes, as the general training has been definitely abolished.

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Session Classification: Education and training in uranium production cycle

**Track Classification:** Education and training in the uranium production cycle