

Decommissioning of uranium pilot plants at IPEN-CNEN/SP: Facilities dismantling, decontamination and reuse as new laboratories for strategic programs

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Radical changes of the Brazilian nuclear policy, in the beginning of 1990s, determined the interruption of most R&D fuel cycle activities and the facilities shutdown at IPEN. Those facilities had already played their roles of technological development and personnel's training, with transfer of the technology for institutions entrusted of the "scale up" of the units. Most of the pilot plants interrupted the activities more than ten years ago, due to the lack of resources for the continuity of the research. The appropriate facilities maintenance had been also harmed by the lack of resources, with evident signs of deterioration in structures and equipment. The existence of those facilities also implicated in the need of constant surveillance, representing additional obligations, costs and problems. It should be emphasized that one of the most concerning aspects, with relationship to the future of the facilities and the postponement of the dismantling, was the loss of the experience accumulated by the personnel that set up and operated the referred units. Besides the mentioned aspects, other reasons to promote the dismantling of the IPEN's Nuclear Fuel Cycle Pilot Plants elapsed mainly from the need of physical space for new activities, since the R&D in the nuclear fuel cycle area were interrupted. In the last decade IPEN has changed its "nuclear profile" to a "comprehensive and multidisciplinary profile". During this period, IPEN has been restructured in 13 Research Centers. With the end of most nuclear fuel cycle activities, the former facilities were distributed in four different centers: Environmental and Chemical Technology Center; Fuel Cell Center; Materials Science and Engineering Center; Nuclear Fuel Center. Each center has adopted a different strategy and priority to face the R&D problem and to reintegrate the areas. The resources available depend on the specific program developed in each area (resources available from other sources, not only CNEN). One of those new activities is the IPEN's Environmental Program. In the building where there was the Uranium Dissolution and Purification Pilot Plant, already dismantled, it was decided to settle the Laboratory of Chemical and Environmental Analyses, being necessary its total liberation from the point of view of radioactive contamination. This paper describes the procedures, problems faced and results related to the reintegration of the former pilot plant areas as new laboratories of the Chemical and Environmental Technology Center –CQMA –of the IPEN.

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