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SELCHEM: A NOVEL DECONTAMINATION PROCESS

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Objectives: To develop a chemical decontamination process that is regenerable and has minimal liquid effluents, for assisting in the decommissioning of nuclear plants.

To develop the regeneration and recycling of the decontaminate.

To evaluate the process at the laboratory and full pilot plant scale.

Comments: The SELCHEM process has been used for both operational and decommissioning decontamination and considerable experience was obtained. It was found that the process has a significant impact on decommissioning strategy.

Remarks: The principal requirements for decontamination for decommissioning purposes are:
- to increase permissible working times in active environments and reduce reliance on remote handling;
- to make substantial savings in disposal costs with the specific aim of maximizing the amount of contaminated metal that can be free released for recycling;
- to reduce contamination levels to permit less onerous working conditions.

A four stage strategy for the decontamination of radioactively contaminated plants was found to be desirable.

The SELCHEM process was found to be potentially useful for decontamination both during the life cycle of the plant and as part of the decommissioning.

References: Salter, T., "SELCHEM 1 & 2 Novel, Regenerable, Minimal Liquid Effluent Decontamination Process," Proceedings, EPRI Radiation Field Control and Chemical Decontamination Seminar, Tampa, Florida, November 1995, available from EPRI Distribution Center, P.O. Box 23205, Pleasant Hill, CA 94523, Phone: (501)934-4212.

Duration: from: 1994 to: 1996

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Status: In progress

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