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VANADIUM ANALYSIS DURING LOMI DECONTAMINATION

Keywords: CONTAMINATION REMOVAL; DECONTAMINATION; DECOMMISSIONING; DOSE; DOSE RATE

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Objectives: To develop an on-line analyzer which utilizes an electrochemical titration for determination of vanadous ion concentration.

Comments: A prototype instrument is under construction with the goal of performing a field evaluation during a chemical decontamination which is scheduled for spring of 1996. Once the instrument is constructed tests will be carried out and its performance evaluated during a LOMI decontamination.

Remarks: Previously continuous analysis of circulating vanadous formic-picolinic acid reagent was carried out by means of the calorimetric method. The completed prototype instrument was evaluated in December 1994 at the James A. Fitzpatrick power plant in New York State. The results were unfavorable because of a light-absorbing interfering material which was believed to be an intercomplex of iron and vanadium. The new approach makes use of that experience.

References: Bishop, J.V., and S. Kottle, "Vanadium Analysis During LOMI Decontamination," 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.

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Funding: N/A

Status: In progress

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