# BNL ALARA Center Data Base

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## LOW PICOLINATE LOMI - UPDATE

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**Objectives:** Review all aspects of the use of low picolinate LOMI.

**Comments:** It was observed that the molar ratio of picolinic acid to vanadium employed during full system decontamination (FSD) applications at the Winfrith SGHWR was 3:1. This is 2 times lower than the 6:1 ratio normally used in the U.S. Detail cost-benefit analyses indicated significant financial benefits if the lower ratio could be safely applied in BWR FSD applications.

Theoretical calculations and experimental studies have confirmed that reducing the molar ratio of picolinic acid to vanadium during LOMI decontaminations from 6:1 to 3:1 will have no adverse effects whatsoever on the decontamination itself and will result in significant savings in chemicals, ion exchange resins and costs. No changes to the corrosion behavior of LOMI are expected.

**Remarks/Potential for dose limitation:** Based on the results of this study, the authors recommend that all future applications of LOMI employ a picolinic to vanadium molar ratio of 3:1 instead of 6:1 or 4.5:1. The advantage is that less chemicals and ion exchange resins are required. This translates to savings of approximately $236,000 and $295,000 per FSD application in BWRs and PWRs, respectively.

**References:** Smee, J.L. and Bradbury, D., "Low Picolinate LOMI -Update," *Fifth Workshop on Chemical Decontamination*, Electric Power Research Institute, Charlotte, North Carolina, 1993.

**Duration:** from: 1992 to: 1993

**Funding:** N/A

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