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Los Alamos

NATIONAL LABORATORY

memorandum

Nuclear Materials Technology
Actinide Process Chemistry
NMT-2

To/MS: Kathleen Gruetzmacher, NMT-7, MS E501

From/MS: Vance Hatler, NMT-2, MS E511 *VH*

Phone/fax: 5-4015/5-1780

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SUBJECT: Results of Chromium Reduction Tests.

In January of 1993 Ron Blankenship and myself performed a set of quick and quantitative tests to predict the oxidation state of chromium in a 8M nitric acid feed solution. We used a test kit obtained from Steve Yarbrow, which was called a chromate kit. This kit consisted of indicator paper and low molar nitric acid. The tests were performed by diluting the feed solution with the low molar nitric acid and dipping the indicator paper into the solution. A reaction occurred yielding a color which could be matched to a chart, which correlated the percentage of chromium ⁺³ and chromium ⁺⁶. Although the tests were quantitative and open to interpretation, the results indicated that greater than 80 percent of the chromium was in the ⁺³ state. We were performing these test during the RCRA stand down in order to expedite approvals to resume aqueous processing operations. If there are any questions regarding this please call me at 5-4015.

cy: Keith Fife, NMT-2, MS E511



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