In the original experiments with the $Pu(NO_3)_4$ solutions, the buffer region consisted of an 11.5 g Pu/liter nitrate solution. Thus, the equilibrium spectrum in the test core is nearly characteristic of that particular solution. A more appropriate spectrum would be that characteristic of the 7.84 g Pu/liter solution, more nearly the null concentration for a $Pu(NO_3)_4$ solution. This correction was easily calculated by varying the buffer region composition in the theoretical model. The corresponding correction reduced the null concentration by 0.26 ± 0.03 g Pu/liter to a value of 7.58 ± 0.14 g Pu/liter for $Pu(NO_3)_4 + H_2O$ (4.6 wt% ^{240}Pu). Due to the ability of the theoretical model to accurately reproduce the measured null concentration for both UO_2F_2 and $Pu(NO_3)_4$ solutions, an estimated error of ±10% on the difference calculation (±0.03) should be extremely conservative.

To obtain a value for the limiting critical concentration of ^{239}Pu in water from the above value, it is necessary to obtain corrections for the 4.6 wt% ^{240}Pu and the NO_3. These corrections were obtained in a manner similar to that used by Masterson,[1] utilizing an 18-group diffusion theory calculation which reproduces known critical experiments for a large variety of $Pu(NO_3)_4$ solutions quite accurately.[7] Thus, an estimated error of ±10% for this correction should also be quite conservative. The correction for the 4.6 wt% ^{240}Pu and the NO_3 amounted to 0.39 ± 0.04 g Pu/liter, giving a final value for the limiting critical concentration for ^{239}Pu in water of 7.19 ± 0.15 g ^{239}Pu/liter. This value is in agreement with the 7.2 g ^{239}Pu/liter value obtained by Richey[7] for k_∞ equal to unity with 18-group constants computed with the GAMTEC-II code with Sher and Felberbaum[8] normalized ^{239}Pu thermal data. Clark,[3] using the RAHAB code with ENDF/B-III cross sections, computed a value of 7.19 g ^{239}Pu/liter.

ACKNOWLEDGMENTS

The author wishes to acknowledge the support given to this investigation by E. D. Clayton and C. L. Brown of the Criticality Research Section and H. L. Henry, manager, Safety and Nuclear Material Management Section at the Pacific Northwest Laboratories.

The work was performed under U.S. Atomic Energy Commission Contract AT(45-1)1830.

[7] C. R. RICHEY, *Nucl. Sci. Eng.*, **31**, 32 (1968).

[8] R. SHER and J. FELBERBAUM, "Least Squares Analysis of 2200 m/sec Parameters of U^{233}, U^{235}, and Pu^{239}," BNL-72, Brookhaven National Laboratory (1962).

Corrigenda

D. G. ANDREWS and M. DIXMIER, "Calculation of Temperature Distributions in Fuel Rods with Varying Conductivity and Asymmetric Flux Distribution," *Nucl. Sci. Eng.*, **36**, 259 (1969).

In Eq. (19) on p. 261, the final fraction in the numerator of the penultimate term of the left-hand side should read "ln r/a" instead of "ln r/A."

C. E. SIEWERT and A. R. BURKART, "An Asymptotic Solution in the Theory of Neutron Moderation," *Nucl. Sci. Eng.*, **54**, 455 (1974).

The following table was mentioned but was not printed:

TABLE I

The Function $K(\beta)$

$-\beta$	$K(\beta)$	$-\beta$	$K(\beta)$	$-\beta$	$K(\beta)$
0.0	∞	0.400	2.6980	1.50	1.7484
0.005	7.3214	0.500	2.5129	2.00	1.5936
0.040	4.9944	0.600	2.3685	3.00	1.4107
0.080	4.2493	0.700	2.2516	5.00	1.2413
0.140	3.6745	0.800	2.1542	10.00	1.1111
0.200	3.3255	0.900	2.0715	50.00	1.0204
0.300	2.9494	0.999	2.0000	∞	1.0000

The Editor regrets the omission of this table which occurred in the publication process.