# ERRATA

## American National Standard Decay Heat Power in Light Water Reactors, ANSI/ANS-5.1-1979

**Bibliography of Foreword:**

(5.) J. R. Perkins should read: (5.) J. F. Perkins

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**Page 5, Equation 15:**

$$F_{239_{Np}}(t,T) = E_{239_{Np}} R \left\{ \frac{\lambda_1}{\lambda_1 - \lambda_2} \left[ 1 - \exp(-\lambda_2 T) \right] \right.$$

$$\left. \exp(-\lambda_2 t) - \frac{\lambda_2}{\lambda_1 - \lambda_2} \left[ 1 - \exp(-\lambda_1 T) \right] \exp(-\lambda_1 T) \right\}$$

(Eq 15)

should have a lower case "t" in the second line of the equation. It should read:

$$F_{239_{Np}}(t,T) = E_{239_{Np}} R \left\{ \frac{\lambda_1}{\lambda_1 - \lambda_2} \left[ 1 - \exp(-\lambda_2 T) \right] \right.$$

$$\left. \exp(-\lambda_2 t) - \frac{\lambda_2}{\lambda_1 - \lambda_2} \left[ 1 - \exp(-\lambda_1 T) \right] \exp(-\lambda_1 t) \right\}$$

(Eq 15)

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**Page 13:**

Units of columns 2 and 3, Table 4, should have the "s" deleted after MeV/

**Table 4 (Cont'd.)**

| Time After Shutdown t(s) | Decay Heat Power $F(t,\infty)$ (MeV/s/fission) | One Sigma Uncertainty $\Delta F(t,\infty)$ (MeV/s/fission) | One Sigma Uncertainty Percent |
|---|---|---|---|

It should read:

**Table 4 (Cont'd.)**

| Time After Shutdown t(s) | Decay Heat Power $F(t,\infty)$ (MeV/fission) | One Sigma Uncertainty $\Delta F(t,\infty)$ (MeV/fission) | One Sigma Uncertainty Percent |
|---|---|---|---|

**Also, Page 13:**

Footnote: (b) Read as $1.231 \times 10^{+0}$

should read: (b) Read as $1.231 \times 10^{+1}$

(See reverse side.)

Page 19:

In Table 8, the seventh entry in the second column of values of $\alpha$ (alpha) should be changed from 5.703E-11 to **5.730E-11**. It should read:

**Table 8**

**Parameters for $^{239}Pu$ Thermal Fission Functions f(t) and F(t,∞)** (a)

| $\alpha$ | $\lambda$ | $\alpha$ | $\lambda$ |
|---|---|---|---|
| 2.083E-01 (b) | 1.002E+01 | 1.747E-06 | 8.319E-06 |
| 3.853E-01 | 6.433E-01 | 5.481E-07 | 2.358E-06 |
| 2.213E-01 | 2.186E-01 | 1.671E-07 | 6.450E-07 |
| 9.460E-02 | 1.004E-01 | 2.112E-08 | 1.278E-07 |
| 3.531E-02 | 3.728E-02 | 2.996E-09 | 2.466E-08 |
| 2.292E-02 | 1.435E-02 | 5.107E-11 | 9.378E-09 |
| 3.946E-03 | 4.549E-03 | 5.730E-11 | 7.450E-10 |
| 1.317E-03 | 1.328E-03 | 4.138E-14 | 2.426E-10 |
| 7.052E-04 | 5.356E-04 | 1.088E-15 | 2.210E-13 |
| 1.432E-04 | 1.730E-04 | 2.454E-17 | 2.640E-14 |
| 1.765E-05 | 4.881E-05 | 7.557E-17 | 1.380E-14 |
| 7.347E-06 | 2.006E-05 | | |

(a)

$$f(t) = \sum_{i=1}^{23} \alpha_i e^{-\lambda_i t} \quad \text{MeV/Fission-s}$$

$$F(t,T) = \sum_{i=1}^{23} \frac{\alpha_i}{\lambda_i} e^{-\lambda_i t} (1-e^{-\lambda_i T}) \quad \text{MeV/Fission}$$

$F(t,\infty) = F(t,10^{13})$

t and T in seconds

(b) Read as $2.083 \times 10^{-1}$