7/27/00

Public Comments

40 GWd/t → 377 watts/bundle

60 GWd/t ⇒ $\frac{60}{40} \times 377 = 565.5$ watts/bundle

700°C rise takes 51 hours at 400 watts/bundle
700°C rise takes 34 hours at 600 watts/bundle

$$51 + (34-51)\frac{565.5-400}{600-400} =$$

$$51 + (-17)(.8275) = 36.93 \text{ hours}$$

⇒ 700°C rise takes 36.93 hours at 565.5 watts/bundle

20°C to 600°C ⇒ 580°C delta

90°C to 600°C ⇒ 510°C delta

$$\frac{580°C}{700°C} \cdot 36.93 \text{ hours} \cdot \frac{1 \text{ day}}{24 \text{ hrs}} = 1.28 \text{ days}$$

$$\frac{510°C}{700°C} \cdot 36.93 \text{ hours} \cdot \frac{1 \text{ day}}{24 \text{ hours}} = 1.12 \text{ days}$$

$$40 \text{ GWd/t} \Rightarrow 1.28 \cdot \frac{60}{40} = 1.92 \text{ days}$$

SFP

7/25/00

Gap release issue

5 years of decay

release fractions from ISG-5

other release fractions
1% for fuel fines
100% for volatiles

Adiabatic heatup calc - see Chris [redacted] Boyd

how long to go to 600°C

how long to go to 800°C

After 24 hours will gap release start.
By 24 hours you could dump sand on it.

"Try to answer gap release question by using BNL's results for gap releases."

CT said: