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SUPPLEMENTAL DATA FOR THE TOPICAL REPORT ON MGCR-HDR-1, 2, AND 3 TESTS

AUTHOR

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SUPPLEMENTAL DATA FOR THE TOPICAL REPORT
ON MGCR-HDR-1, 2, AND 3 TESTS

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SUPPLEMENTAL DATA FOR THE TOPICAL REPORT ON
MGCR-HDR-1, 2, AND 3 TESTS

The topical report on irradiation testing of MGCR-HDR-1, 2, and 3 in the DR-1 Gas Loop⁽¹⁾ was issued as an unclassified document to facilitate its distribution to interested parties. This supplement to the document reports test data that are classified because of their relationship to reactor production factors.

	<u>MGCR-1⁽²⁾</u>	<u>MGCR-2⁽²⁾</u>	<u>MGCR-3⁽³⁾</u>
Total U, grams	13.960	14.28	1159.28
Enrichment, grams	13.015	13.33	42.54
Integrated exposure, kw days	767.3	934.6	2851.5*
Thermal neutron flux, neutrons/cm ² /sec	1.3x10 ¹³	1.6x10 ¹³	2.0x10 ¹³

* - as of 4-16-61

The thermal neutron flux is reported in conventional (2200 m/sec) terms. The "true" thermal flux, based on the product of the neutron density and the average thermal neutron velocity under actual irradiation conditions, is approximately twice the conventional value. To utilize the "true" neutron flux in calculations, it is necessary to use U²³⁵ fission cross sections corresponding to the average thermal neutron velocity, which is approximately twice the conventional velocity.

E. C. Bennett

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E. C. Bennett/rch

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