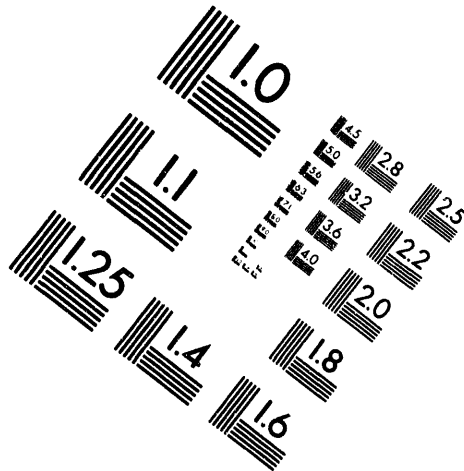
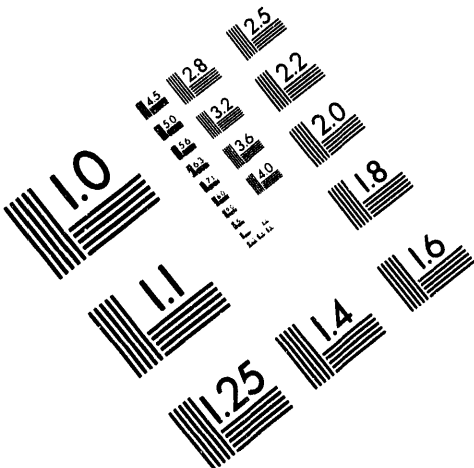




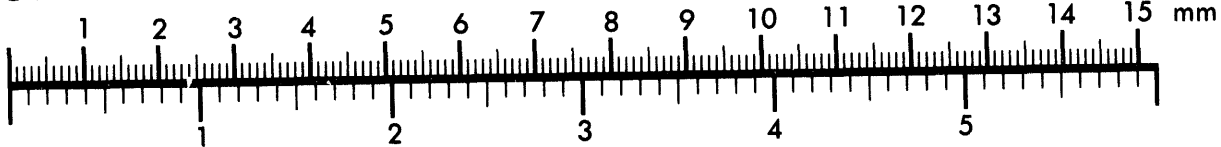
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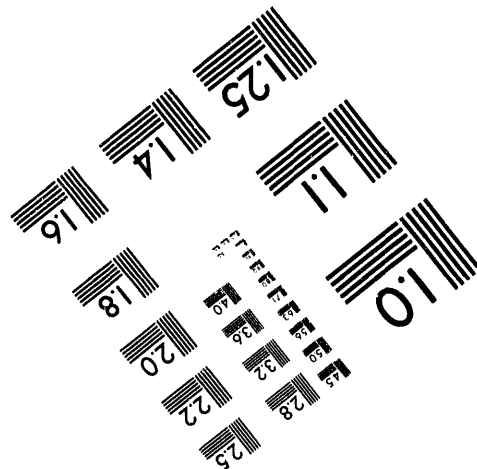
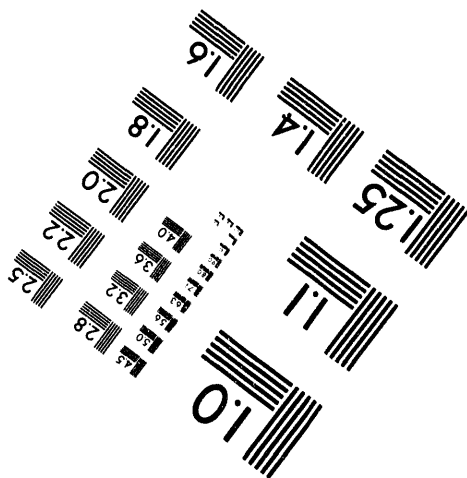
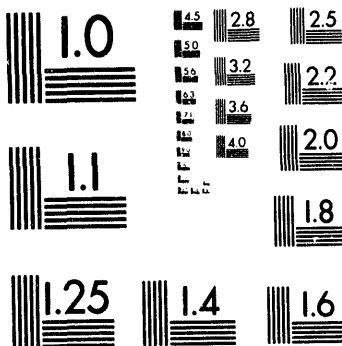
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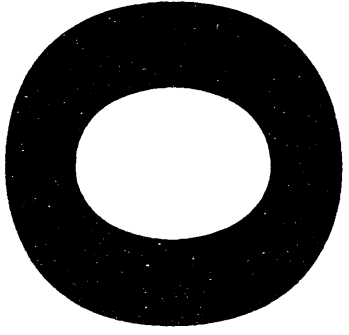
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SPECIAL REVIEW OF SELECTED REACTOR
CONSTRUCTION, OPERATION, AND PROGRAM DATA

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SPECIAL REVIEW OF SELECTED REACTOR
CONSTRUCTION, OPERATION, AND PROGRAM DATA

The following information was developed at the request of management on December 17, 1962; this report documents the answers to specific questions asked at that time.

1. What were the design and construction start and completion dates of Project CG-558 - 600?

a. CG-558 (100-B, D, DR, F, and H)

Start

Preliminary Design	July 1, 1953 (1)
Detail Design	December 21, 1953 (2)
Construction	June 29, 1954 (2)

Completion *

Detail Design	March 1, 1956 (2)
Construction	December 13, 1956 (2)
Beneficial Use (3)	
B - December 8, 1956	
D - March 22, 1957	
DR - February 15, 1957	
F - May 17, 1957	
H - June 20, 1957	

b. CG-600 (100-C)

Start

Preliminary Design	September 14, 1953 (1)
Detail Design	October 15, 1954 (2)
Construction	December 7, 1954 (2)

Completion

Detail Design	May 26, 1956 (2)
Construction	June 9, 1960 (4)
Beneficial Use	July 1, 1958 (4)

2. What was the percent power level increase design for CG-558 - 600?

<u>Project</u>	<u>Base Nominal Power(MW)</u>	<u>Design Nominal Power(MW)</u>	<u>Power Differential(MW)</u>	<u>Differential/Base</u>
CG-558	4728	6406	1678	35.5% (5)
CG-600	1460	1700	240	16.4% (6)

*Does not include 182-FA pump test stand feature.

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3. What was the actual power level increase achieved?

<u>Project</u>	<u>Base Nominal Power (MW)</u>	<u>Actual Nominal Power (MW)</u>	<u>Power Differential (MW)</u>	<u>Differential/ Base</u>
CG-558	4319 (7)	7204 (8)	2885	66.8%
CG-600	1427 (9)	1769(10)	342	23.9%

4. What was the construction completion date of DR Reactor?

105 Building - August 29, 1949 (11)*

*The last feature of the project accepted was the 107 Basin on October 21, 1949.

5. On what date was the expansion-overbore program study initiated?

\$100,000 was allocated for the initiation of subject study on August 14, 1959 (12).

6. What was date of first oral overbore-type proposal made to HOO-AEC?

Available information indicates that formal oral contact first occurred about January, 1960.

proliferation?

7. When was the initial documentation of overbore - expansion program?

The initial intra-Company documentation-October 6, 1959. (13)

The initial documentation to HOO-AEC was April 1, 1960.(14)

The initial budget submittal was April 27, 1960⁽¹⁵⁾ for 200 mil overbore at F Reactor, on a lead reactor basis.

8. When was the first budget submission for the Reactor Modification Program (RMP) and for what fiscal year? When were other budget submissions and for what fiscal years? What were the cost estimates?

<u>Reactor</u>	<u>Date Submitted</u>	<u>Fiscal Year</u>	<u>Cost Estimate</u>
C	10/10/60	1962	\$ 10,700,000 (16)
C	4/11/61	1963	15,000,000 (17)
C	3/8/62	1963	15,000,000 (18)
B	3/30/62	1964	14,700,000 (19)
H	3/30/62	1964	15,000,000 (19)

9. What is conversion ratio increase from the RMP?

Considering the total program for six reactors (500 mil), the conversion ratio increase approximates 13 per cent.(20)

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10. What is the production capacity increase from the RMP?

Based on the total program for six reactors (500 mil) the per cent production capacity increase approximates 70 for the five old reactors and 44 for C Reactor. (20)

11. What are the design completion dates, both record and actual for H, C, DR, and K Reactors?

Detailed Design (record)

- H - October, 1949 (21)
- DR - August 25, 1948 (22)
- C - February 7, 1952 (23)
- K - February 27, 1954 (KE/KW) January 27, 1955 (KER) (24)

Design Liaison

No actual record of dates of completion; however, it was routine for liaison to extend through the acceptance testing and acceptance of the construction, which was:

- H - January 6, 1950 (21)
- DR - October 25, 1949 (22)
- C - November 18, 1952 (23)
- K - December 21, 1956 (24)

REFERENCES

- (1) Monthly Progress Report for Construction Jobs.
- (2) Semi-Monthly Status Report as of October 26, 1959.
- (3) HW-24800 104, Completion Report, Projects CG-558 and 600, dated March 31, 1961, GR Hale, GR Bauer, and TF Lyons.
- (4) Physical Completion Notice, Project CG-600, 100-C Alterations, dated June, 1960.
- (5) HW-30205, Preliminary Project Proposal, Reactor Plant Modifications For Increased Production, Project CG-558, dated February 4, 1954, HE Hylbak.
- (6) HW-36673, Project Proposal, Rev. No. 1, 100-C Alterations, Project CG-600, dated May 19, 1955, AA Janos.
- (7) Actual average for January, February, March, 1956.
- (8) Actual average for January, February, March, 1959.
- (9) Actual average for January, February, March, 1958.
- (10) Actual average for January, February, March, 1960.
- (11) HW-24800 34, Design and Construction History, dated January, 1953.
- (12) FEO Work Authorization - Allocation of Operating Program and R&D Funds For FY-1960, by RT Jessen, August 14, 1959.

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- (13) HW-62167, Interim Report No. 1, Graphite Overboring Study, dated October 6, 1959, CW Botsford.
- (14) HW-62862, Plant Improvement Program, Irradiation Processing Department, dated April 1, 1960, AB Greninger.
- (15) HW-64918, HAPO Plant Acquisition and Construction Budget for FY-1962 and Revision of Budget for FY-1961, dated April 27, 1960, RA Connell.
- (16) HW-67061, Modifications for Increased Production, C Reactor, dated October 10, 1960, JW Ballowe.
- (17) HW-69010, HAPO Plant Acquisition And Construction Budget For FY-1963 and Revision of Budget For FY-1962, dated April 11, 1961, RA Connell.
- (18) HW-72927, Reactor Modification Program - C Reactor, Plant Acquisition and Construction Budget, FY-1963 Revised, dated March 8, 1962, JW Ballowe.
- (19) HW-73159, HAPO Plant Acquisition and Construction Budget For FY-1964 And Revision of Budget For FY-1963, dated March 30, 1962, RA Connell.
- (20) HW-73025, Rev. 1, Irradiation Processing Department, Plant Improvement Program Production Data, dated March 23, 1962, HW Heacock and JW McCurry.

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