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LAMD-288

Redacted version

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GMX-423

MINUTES
FAMILY COMMITTEE MEETING
April 6, 1950
Fifth Meeting

The fifth meeting of the Family Committee was held Thursday, April 6, 1950 at 1:15 p.m. in Room B-117.

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Present:
Edward Teller, Chairman
N. E. Bradbury
J. C. Clark
F. de Hoffman
D. K. Froman
R. W. Goranson
E. F. Hammel
P. Hammer
M. G. Holloway
E. R. Jette
C. L. Longmire
D. P. MacDougall
J. C. Mark
J. C. Potts
R. F. Taschek

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DOE b(3)

DISCUSSION OF MARCH 30/50 MINUTES

In connection with the figure on page 4, Froman suggested that only the top portion of the pipe would require evacuation. Because various statements made by York appeared to be somewhat conflicting, Teller asked Clark to obtain clarification on this point. (Note added April 7: The radiation path requires evacuation, the optical path does not.)

DOE b(3)

Teller remarked that it was agreed one will try to use a standard initiator but that a decision should not be forced at this time.

DOE b(3)

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW
T REVIEW DATE: 630626
THORITY: [illegible]
ME: [illegible]
D REVIEW DATE: 8/28/97
THORITY: ADD
ME: [illegible]
DETERMINATION (CIRCLE NUMBER)
1. CLASSIFICATION RETAINED
2. CLASSIFICATION CHANGED TO:
3. CONTAINS UNCLASSIFIED INFO
4. COORDINATE WITH:
5. CLASSIFICATION CANCELLED
6. CLASSIFIED INFO BRACKETED
7. OTHER (SPECIFY):

-1-

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Cite 5

This preference was based on a study of the Rala results; in particular of the last two iron shots.

DOE b(3)

2. Pin measurements indicate no significant difference in symmetry in any one shot. Furthermore, as may be seen from Table 1, the spread in ball values from shot to shot is not significantly different for the two models.

It was also agreed, in order that IBM meet the July 1 date, to reach a decision during this meeting.

DOE b(3)

This ratio will be determined by W-Division.

(Longmire and Hammer left meeting).

DOE b(3)

DOE b(3)

In addition there are production problems involving facilities at Eniwetok. Hammel was asked to summarize the situation.

Teller asked that the committee be brought up to date on results of conferences in the East. In connection with Hydrocarbon Research plant for heavy water it was anticipated that there could be an excess of several thousand liters hydrogen per hour. The feasibility of transportation from the plant was considered. This was discussed with Grilly and Brickwedde at an ONR conference in Atlanta. It was decided by Grilly, Brickwedde and Hammel that the above would not be a good idea and that plants should be constructed where needed. Benedict was then informed of Los Alamos lack of interest and expressed relief in not being required to meet new conditions. DO b(3)

The gist of this discussion has therefore been paraphrased below.

1. [redacted] DOE b(3)

2. Fig. 1 is a composite of suggested designs.

3. [redacted] DOE b(3)

4. [redacted]

5. [redacted]

6. Interference with X-ray measurements? [redacted] DO b(3)

[redacted] This involves use of a periscopic device so that rigidity of the tower would become important. The designers quote the following information on tower deflections. "For the 300 ft. tower with stiffening members added, Holmes and Narver furnish the following data (CHN-484, 6 Apr '50):

	Deflections for 30 m.p.h. wind
300 ft. level	3.5 inches
200 ft. level	2.2 "
100 ft. level	1.1 "

2.

3.

4.

5.

DOE b(3)

DOE b(3)

Booster

1. Fig. 3 shows schematically the transfer device for filling the booster.

Second Phase of Program

The second phase of the program, predicated on success with the above tests, will require appreciable amounts of Deuterium.

The following plans for Eniwetok are being made:

(a) Liquid nitrogen plant as a preliminary coolant.
(b) Liquid hydrogen plant with capacity of 25-30 liters per hour
(negotiations for these two are underway)
(c) Small liquid helium plant (Collins) of 3 liters/hr capacity (on order)
(d) Bureau of Standards has a contract for 200 liter/hr plant which is expected to be completed in 1-1/2 to 2 years. It will be brought to Los Alamos for test. Excess parts are being ordered so that this plant can be duplicated. This will need to be bolstered by a 200 liter/hr liquid nitrogen plant at Eniwetok.

DOE b(3)

Hammel pointed out that the output of the Hydrocarbon Research plant is 96% D_2 and 4% Ne. By fractional distillation and separation tower this would yield 99.9% D_2.

DOE b(3)

DOE b(3)

Holloway asked what tolerances would be acceptable. The following specifications were suggested. A report of this review will be presented at the next meeting of the Family Committee.

1.

2.

3.

4.

5.

6. Taschek and Teller will determine the amount of $T_2 + D_2$ required.

DOE b(3)

Teller thought that a reasonable answer could be provided in about two weeks.

HEALTH HAZARD AND RALA PROGRAM

Jette pointed out that the Health Department in Washington has decreased the radiation tolerance limits to one-half the previous ones. This may cause delays in carrying out the Rala program during the period that further protection schemes are being developed.

In addition the β-ray film factor heretofore used is not correct and the new factor is apt to be an adverse one.

AGENDA FOR FUTURE MEETINGS

The next meeting will be held in B-117 on April 20 (PLEASE NOTE)
The topic will be

1.
2.
3. Scheduling Program

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R. W. Goranson
Acting Secretary

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TABLE I

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