ALMD60082090996

MOUND LABORATORY-MONSANTO
Central File No.

SECRET
DATE

Mr. Victor N. Karpenko
P. O. Box 808
University of California
Lawrence Radiation Laboratory
Livermore, California

August 26, 1960

Dear Vic:

The information that we collected during and after fabrication of the 12 (6 pairs) pressed LiH domes is tabulated on the enclosed sheets.

The LiH was purchased from The Lithuim Corporation of America as their extra dry grade packaged in inert gas. The maximum water content of the argon atmosphere to which the salt and/or domes where exposed was -52°F. A sample of the LiH after grinding, which is representative of the material used in the dome fabrication, was screened and weighed. The results are:

<	20 Mesh	8.0%
	20-40 Mesh	78.6%
	40-80 Mesh	9.4%
>	780 Mesh	4.0%

The exposure time of the salt to the box atmosphere is given on the individual sheets as time of opening, grinding, pressing, gauging, and sealing in the polyethytene bags.

If any additional information is desired, please do not hesitate to contact us.

MOUND DECLASSIFICATION REVIEW
1ST REVIEW-DATE: 8/28/88
AUTHORITY ☐AOC ☐ADC ☐ADD
NAME: J. W. FANAGAN
2ND REVIEW-DATE:
AUTHORITY ADD
NAME:
DETERMINATION (CIRCLE NUMBER(S))
1. CLASSIFICATION RETAINED
2. CLASSIFICATION CHANGED TO:
3. CONTAINS NO DOE CLASSIFIED INFO
4. COORDINATE WITH:
5. CLASSIFICATION CANCELLED
6. CLASSIFIED INFO BRACKETED
7. OTHER (SPECIFY):

Very truly yours,

R. E. Vallee
Group Leader
Research Division

REV: kh

cc: 1- Victor N. Karpenko (L. R. L.)
2- Barney Rubin (L. R. L.)
3- H. H. Otsuki (L. R. L.)
4- J. F. Eichelberger
5- D. L. Scott
6- G. R. Grove
7- L. V. Jones
8- R. E. Vallee

Released through the
MOUND LSDR PROJECT
(funded through DOE's OPENNESS INITIATIVE)
Record Copy held at Mound Facility

RESTRICTED DATA

SECRET

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1-a Salt weight = 565.5 ± 1.0 gm 8-15-60

Depth of inside bell = 1.582"

Degrees	Inches
0	3.099
2	3.099
4	3.098
6	3.098
8	3.097
10	3.096
12	3.094
14	3.092
16	3.090
18	3.088
20	3.085
22	3.082
24	3.079
26	3.076
28	3.073
30	3.070
32	3.067
34	3.064
36	3.062
38	3.060
40	3.058
42	3.056
44	3.055
46	3.055
48	3.055
	⋮
90°	3.055

Salt opened and

Ground 8-15-60 A.M.
Pressed 8-15-60 Noon
Gauged 8-15-60 P.M.
Bagged 8-15-60 P.M.

Per cent theoretical ρ = 86%

SECRET

SECRET

A-2

0	3.100
2	3.099
4	3.098
6	3.098
8	3.097
10	3.095
12	3.093
14	3.091
16	3.089
18	3.086
20	3.083
22	3.080
24	3.077
26	3.074
28	3.071
30	3.067
32	3.064
34	3.062
36	3.060
38	3.058
40	3.056
42	3.056
44	3.055
46	3.055
90°	3.055

Weight = 568.0 ± 1.0 gm.

Depth (inside ball) 1.580"

Salt opened 8-15-60 P. M.
pressed 8-16-60 A.M.
gauged 8-16-60 A.M.
sealed 8-16-60 A.M.

Dew Point = -52°F.

Per cent theoretical ρ = 88%

SECRET

SECRET

3-A

Degrees	Radius
0	3.099
2	3.099
4	3.098
6	3.097
8	3.096
10	3.094
12	3.092
14	3.090
16	3.088
18	3.085
20	3.082
22	3.079
24	3.076
26	3.073
28	3.069
30	3.067
32	3.064
34	3.062
36	3.060
38	3.058
40	3.056
42	3.055
44	3.055
46	3.054
↓	↓
90°	3.054

Weight = 568.5 ± 1.0 gm.

Depth (inside ball) = 1.580"

Salt opened 8-15-60 A.M.
pressed 8-16-60 A.M.
gauged 8-16-60 A.M.
sealed 8-16-60 A.M.

Dew Point = -52°F.

Per cent theoretical ρ = 86%

SECRET

SECRET

4-A

Degrees	Radius Inches
0	3.100
2	3.100
4	3.099
6	3.098
8	3.097
10	3.095
12	3.093
14	3.091
16	3.089
18	3.086
20	3.083
22	3.080
24	3.077
26	3.074
28	3.071
30	3.069
32	3.065
34	3.063
36	3.061
38	3.059
40	3.057
42	3.056
44	3.056
	⋮
90°	3.056

Salt weight = 568.5 ± 1.0 gm.

Depth (inside ball) = 1.580"

Salt opened 8-15-60 A.M.
pressed 8-16-60 A.M.
gauged 8-16-60 A.M.
sealed 8-16-60 A.M.

Dew Point = -52°F.

Per cent theoretical ρ = 86%

SECRET

5-A

Degrees	Radius
0	3.099
2	3.099
4	3.098
6	3.098
8	3.096
10	3.094
12	3.093
14	3.091
16	3.088
18	3.086
20	3.084
22	3.081
24	3.078
26	3.075
28	3.072
30	3.069
32	3.066
34	3.064
36	3.062
38	3.060
40	3.058
42	3.056
44	3.056
90°	3.056

Salt weight = 569.0 ± 1.0 gm.

Depth (inside ball) = 1.581"

Salt opened and

ground	8-16-60 P.M.
pressed	8-16-60 P.M.
gauged	8-17-60 A.M.
sealed	8-17-60 A.M.

Per cent theoretical ρ = 86%

6-A

Degrees	Radius
0	3.102
2	3.102
4	3.101
6	3.101
8	3.099
10	3.098
12	3.096
14	3.094
16	3.091
18	3.088
20	3.085
22	3.082
24	3.079
26	3.076
28	3.073
30	3.070
32	3.067
34	3.065
36	3.063
38	3.061
40	3.059
42	3.058
44	3.058
46	3.057
.	.
.	.
.	.
.	.
.	.
.	.
90°	3.057

Salt weight = 567.0 ± 1.0 gm.

Depth (inside ball) = 1.578"

Salt opened and
ground 8-16-60 P.M.
pressed 8-17-60 A.M.
gauged 8-17-60 A.M.
sealed 8-17-60 A.M.

Per cent theoretical ρ = 86%

7.

1-B Salt weight = 458.2 ± 1.0 gm.

Degrees	Inches
0	2.465
2	2.470
4	2.474
6	2.482
8	2.492
10	2.506
12	2.524
14	2.544
16	2.568
18	2.593
20	2.620
22	2.644
24	2.666
26	2.681
28	2.696
30	2.711
32	2.725
34	2.740
36	2.754
38	2.768
40	2.783
42	2.796
44	2.810
46	2.822
48	2.834
50	2.846
52	2.858
54	2.870
56	2.882
58	2.893
60	2.905
62	2.918
64	2.930
66	2.941
68	2.952
70	2.963
72	2.974
74	2.985
76	2.996
78	3.005
80	3.015
82	3.024
84	3.033
86	3.043
88	3.052
90	3.057

Salt opened and

ground 8-17-60 A.M.
pressed 8-17-60 A.M.
gauged 8-17-60 A.M.
sealed 8-17-60 P.M.

Per cent theoretical ρ = 86%

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2-B

Degrees	Inches
0	2.467
2	2.469
4	2.474
6	2.481
8	2.492
10	2.506
12	2.524
14	2.544
16	2.568
18	2.593
20	2.620
22	2.644
24	2.666
26	2.681
28	2.696
30	2.711
32	2.726
34	2.740
36	2.754
38	2.768
40	2.782
42	2.796
44	2.810
46	2.822
48	2.834
50	2.846
52	2.857
54	2.870
56	2.881
58	2.893
60	2.905
62	2.917
64	2.929
66	2.941
68	2.952
70	2.963
72	2.974
74	2.984
76	2.995
78	3.005
80	3.015
82	3.024
84	3.033
86	3.042
88	3.051
90	3.055

Salt weight = 457.8 ± 1.0 gm.

Depth (inside ball) = 1.579

Salt opened 8-17-60 P.M.
ground 8-17-60 P.M.
pressed 8-17-60 P.M.
gauged 8-17-60 P.M.
sealed 8-17-60 P.M.

Dew Point = -52°F.

Per cent theoretical ρ = 86%

SECRET

3-B

8-18-60

Degrees	Inches
0	2.466
2	2.468
4	2.472
6	2.480
8	2.481
10	2.504
12	2.522
14	2.542
16	2.565
18	2.592
20	2.618
22	2.643
24	2.664
26	2.680
28	2.695
30	2.710
32	2.725
34	2.739
36	2.753
38	2.767
40	2.781
42	2.796
44	2.809
46	2.821
48	2.833
50	2.845
52	2.857
54	2.869
56	2.881
58	2.893
60	2.905
62	2.917
64	2.929
66	2.941
68	2.952
70	2.963
72	2.974
74	2.984
76	2.995
78	3.005
80	3.015
82	3.024
84	3.033
86	3.042
88	3.051
90	3.055

Salt weight = 457.5 ± 1.0 gm.

Depth (inside ball) = 1.581"

Salt opened 8-17-60 P.M.
ground 8-18-60 A.M.
pressed 8-18-60 A.M.
gauged 8-18-60 A.M.
bagged 8-18-60 A.M.

Per cent theoretical ρ = 86%

SECRET

4-B

8-18-60

Degrees	Inches
0	2.467
2	2.469
4	2.473
6	2.481
8	2.492
10	2.505
12	2.523
14	2.544
16	2.567
18	2.593
20	2.620
22	2.644
24	2.665
26	2.681
28	2.696
30	2.711
32	2.726
34	2.740
36	2.754
38	2.768
40	2.782
42	2.796
44	2.810
46	2.822
48	2.834
50	2.845
52	2.858
54	2.870
56	2.882
58	2.893
60	2.905
62	2.917
64	2.929
66	2.941
68	2.952
70	2.963
72	2.974
74	2.985
76	2.996
78	3.005
80	3.015
82	3.024
84	3.033
86	3.043
88	3.052
90	3.057

Salt weight = 458.0 ± 1.0 gm.

Depth (inside ball) = 1.579"

Salt opened 8-18-60 A.M.
ground 8-18-60 A.M.
pressed 8-18-60 A.M.
gauged 8-18-60 A.M.
bagged 8-18-60 A.M.

Per cent theoretical ρ = 86%

SECRET

5-B

8-18-60

Degrees	Inches
0	2.464
2	2.466
4	2.471
6	2.479
8	2.489
10	2.503
12	2.521
14	2.541
16	2.565
18	2.591
20	2.617
22	2.642
24	2.664
26	2.680
28	2.695
30	2.710
32	2.725
34	2.739
36	2.753
38	2.767
40	2.781
42	2.795
44	2.809
46	2.821
48	2.833
50	2.845
52	2.857
54	2.869
56	2.881
58	2.893
60	2.905
62	2.917
64	2.929
66	2.941
68	2.952
70	2.963
72	2.974
74	2.984
76	2.995
78	3.006
80	3.015
82	3.024
84	3.033
86	3.043
88	3.052
90	3.056

Salt weight = 458 ± 1.0 gm.

Depth (inside ball) = 1.578"

Salt opened 8-18-60 A.M.
ground 8-18-60 P.M.
pressed 8-18-60 P.M.
gauged 8-18-60 P.M.
bagged 8-18-60 P.M.

Per cent theoretical ρ = 86%

SECRET

6-B

8-18-60

Degrees	Inches
0	2.467
2	2.469
4	2.474
6	2.481
8	2.492
10	2.506
12	2.525
14	2.544
16	2.568
18	2.594
20	2.620
22	2.644
24	2.666
26	2.682
28	2.696
30	2.711
32	2.726
34	2.740
36	2.754
38	2.769
40	2.783
42	2.797
44	2.810
46	2.822
48	2.835
50	2.846
52	2.858
54	2.871
56	2.882
58	2.894
60	2.906
62	2.918
64	2.930
66	2.942
68	2.953
70	2.963
72	2.974
74	2.985
76	2.996
78	3.006
80	3.015
82	3.024
84	3.034
86	3.043
88	3.052
90	3.055

Salt weight = 459 ± 1.0 gm.

Depth (inside ball) = 1.581"

Salt opened 8-18-60 P.M.
ground 8-18-60 P.M.
pressed 8-18-60 P.M.
gauged 8-18-60 P.M.
bagged 8-18-60 P.M.

Per cent theoretical ρ = 86%