JOB 884

Field Manager
Eniwetok Field Office
P.O. Box 5400
Albuquerque, New Mexico

19 October 1953

Subject: Time Required to Close Ports -
           Stations 1341 and 1342

Dear Sir:

As requested by your letter PG-2c- 3503 dated October 5,
1953 and J-6 letter J-20462 dated September 28, 1953, we
are submitting the following information on the above
subject:

> The time interval from the instant of release to
> the instant of contact with the sill has been
> calculated using pendulum theory to be approx-
> imately 0.4 seconds. This calculation neglects
> the effect of friction, air resistance and possible
> cushioning effect of entrapped air. It is believed
> that the cushioning effect of the air is the most
> important of these.
>
> A very crude estimate of the cushioning effect is
> obtained by applying Boyle's Law to the volume of
> air contained in the bunker and between the door
> leaf and the opening, with the door in the 45
> degree position.
>
> On this basis, compression of the air begins at
> about 0.3 seconds after release, but the door
> still closes within 0.5 seconds.
>
> Accurate determination of the closing time will
> be determined by field tests

Very truly yours,

HOLMES & NARVER, INC.

David L. Narver, Jr.
Chief Project Engineer

DLNJr:jp

cc: P. W. Spain, AEC
      Robert W. Newman, J-Div., LASL
      Constr.-Oper. Div. (2)
      C. L. A. Bockemohle
      Project Engineer File (2)