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DATE: 6/30/60 INIT: *EPH*

MOUND LABORATORY-MONSANTO
Central File No. 60-7-5

**MOUND LABORATORY
OPERATED BY
MORGAN CHEMICAL COMPANY
MADISON, OHIO**

MOUND DECLASSIFICATION REVIEW	
1ST REVIEW DATE: <u>7/11/78</u>	DETERMINATION (CIRCLE NUMBER)
AUTHORITY: <u>DAOC, EADC, DADD</u>	1. CLASSIFICATION RETAINED
NAME: <u>J. W. FLANNERY</u>	2. CLASSIFICATION CHANGED TO
2ND REVIEW DATE: <u>8/15/98</u>	3. CONTAINS NO DOE CLASSIFIED INFO
AUTHORITY: <u>DAOC</u>	4. COORDINATE WITH
NAME: <u>A. G. Ratay</u>	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY)

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MOUND LSDR PROJECT
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RESEARCHER DEVELOPMENT STATUS REPORT

AS OF JUNE 30, 1960

SUBMITTED TO: E. A. Rembold, Production Superintendent
**SUBMITTED BY: L. B. Gagey, General Operating Supervisor
Production Division**

**FOR: E. C. Larsen, Leader
Special Materials Staff
University of California
Lawrence Radiation Laboratory
Livermore, California**

- Distribution:**
- Copy 1 - E. C. Larsen (Attn. Mrs. E. Furien, LRL)
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RESTRICTED DATA

This document contains restricted data as defined in the Atomic Energy Act of 1954. Its transmittal or the disclosure of its contents in any manner to an unauthorized person is prohibited.

Date: June 30, 1960

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DETONATOR DEVELOPMENT STATUS REPORT

The following is a summary of the status of Mound Laboratory support work on the LRL Detonator Programs.

KITE PELLETS

Kite pellets have been pressed experimentally. It will be necessary to press this pellet hot in order to attain the desired density and dimensions. Further work will be done to more fully evaluate the pressing characteristics of this pellet.

RING PELLETS

Tooling for both the flat and the curved pellets have been inspected and accepted. Liners for both pellets are in our Inspection Department, and inspection of these items is being expedited.

EX-12 DETONATORS

The cause of the poor and erratic signals in the first Mound lots of EX-12B detonators has been discovered by LRL. The PETN well on many of the assemblies was being shortened after gaging by the pressure applied by the PETN loading tool. This tool was initially designed in such a way that it exerted a shearing force between the sleeve and the plug which broke some of the glue bonds, pushing the sleeve further down on the plug. Some wells were short by as much as 0.020. The tool has now been redesigned so that pressure is no longer exerted in this manner. Mound is also obtaining sleeves which seat on the shoulder of the plug.

Mound will furnish LRL, at no cost, 200 EX-12B detonators to replace those previously furnished but which had poor firing results.

LRL order SANL 390/46/6162707, at the request of R. C. Myers, is to consist of one group of essentially 250 EX-12B detonators and one group of essentially 250 EX-12D detonators. Of the first group, 307 are ready for loading, and 100 have been loaded. It is expected that there will be about 350 acceptable detonators prior to test firing, and that these will be test fired by July 8, 1960. The group of EX-12D plugs is being serial numbered and voltage tested.

Tooling for the most recent EX-12 pellet has been received and inspected. It did not meet the drawing and had to be returned for rework.

AIR LINE ASSEMBLIES

The last shipment of load coils to complete the order for 1840 was shipped on June 3, 1960.

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DETRONATOR DEVELOPMENT STATUS REPORT

MOUND LABORATORY

AIR LINE ASSEMBLIES (CONTINUED)

Samples of our contour 4 pellets were sent to LRL for their evaluation, however, the decision was made that Mound should supply the second 920 of the 690 Sub-Assemblies using contour 3.1 pellets. By June 29, 1960, 432 of these had been shipped, and it is estimated that this order will be completed by July 8, 1960.

Samples of contour 3.1 pellets made with our second set of pellet tooling have been sent to LRL for evaluation.

SERIES 612 DEVELOPMENT PELLET (L15H3912)

During the recent visit of Mr. Henry, he requested that Mound make some of these combination pellets for his evaluation. Tooling is being fabricated to adapt parts of the Kite and the curved Ring pellet tooling to make this pellet. Sample pellets are expected to be available by July 15, 1960.

1E28 DETONATORS

Molds for the 1E28 head have been received and inspected and are ready to be used. Cups are on hand and are being inspected. All tooling except the head-cable laminating die is ready for use. This laminating die has been redesigned to prevent delamination of the cable during assembly of the cable to the head. It will also put the bend in the cable.

Cable is due for delivery from our vendor (Reynolds Industries, Santa Monica, California) but none has been received. A Mound engineer visited the vendor on June 30, 1960, to expedite this item.

As a parallel path to pressing HE directly into the cup, some 300 experimental 1E28 pellets were pressed on a Stokes press. It is believed that these pellets can be made to the specifications in this manner with better tooling than the experimental tooling which was used.

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