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**MOUND LABORATORY
OPERATED BY
MONSANTO CHEMICAL COMPANY
MIAMISBURG, OHIO**

MOUND LABORATORY-MONSANTO
Central File No. 60-4-30

TUBA DEVELOPMENT STATUS REPORT

AS OF MARCH 31, 1960

SUBMITTED TO: J. F. Eichelberger, Research Director
SUBMITTED BY: G. R. Grove, Section Leader, Research Division

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

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| MOUND DECLASSIFICATION REVIEW | |
|--------------------------------|------------------------------------|
| 1. REVIEW DATE <u>6/15/68</u> | DETERMINATION (CIRCLE NUMBER) |
| AUTHORITY (DAOC, DAOC, CIADD) | 1. CLASSIFICATION RETAINED |
| NAME <u>Tim. FLANNAGAN</u> | 2. CLASSIFICATION CHANGED TO |
| 2ND REVIEW DATE <u>6/22/78</u> | 3. CONTAINS NO DOE CLASSIFIED INFO |
| AUTHORITY ADD | 4. COORDINATE WITH |
| NAME <u>Asst. Atty.</u> | 5. CLASSIFICATION CANCELLED |
| | 6. CLASSIFIED INFO BRACKETED |
| | 7. OTHER (SPECIFY) |

Date: April 1, 1960

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RESTRICTED DATA

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**TUBA STATUS REPORT FOR
MARCH 1960**

Two Major Work Orders were prepared and processed following receipt of the letter from Dr. J. S. Foster dated March 16, 1960 authorizing us to proceed on the Tuba Program. One of the Work Orders will be charged against LRL at Livermore, California. This includes the design, procurement and installation of welding equipment and fixtures, auxiliary tools, dies and pressure testing apparatus. The other Work Order will be covered by Mound Laboratory and includes the procurement and installation of vacuum dry boxes, relocation of a 200-ton press, and the purchase of associated capital equipment.

TUBA FABRICATION FACILITY

The present plan is to install a hot facility for the Tuba assembly on a concrete slab in the northwest corner of the SW-1C area. The slab is to be 15' x 25' on which will be mounted vacuum dry boxes to perform mixing, pressing, and welding operations. The dry boxes are to be able to withstand a 29-inch mercury vacuum with a maximum pressure rise of 5 microns per minute.

The dry boxes will be positioned such that the on-site 200-ton press will be separate from the weld-mix units. The press system will consist of three (3) modular units connected together in such a manner that they may be disassembled for other work at some future date. The mix dry boxes will consist of two (2) modular units, each three (3) feet in length, and will be attached to the four-foot welding box by means of a pass box tunnel. A second four-foot welding dry box is to be installed in R-171 to be used for preliminary welding development. All dry boxes are to be made of No. 304 stainless steel with polished welded seams.

The pouring of the concrete slab is out on bid as are bids for the dry boxes. Complete sets of drawings are to be submitted within nine (9) days, and delivery of the finished dry boxes must be made by May 1, 1960.

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TUBA STATUS REPORT FOR MARCH 1960

MOUND LABORATORY

Design for remodeling SW-1C with regard to ventilation, enclosure of the concrete slab, and making provisions to use the De-oxo unit of the SW-1B area has begun. Stacking of the products of the De-oxo unit is contemplated. There is no plan at present to recirculate exhaust atmospheres from the dry boxes through an electro-dryer.

Design is also underway on a lathe-type welding fixture to be used initially in the R-171 welding dry box. Design on the dies for the forming press may be done by Mound Engineering or may be put out on bids to one of the dry box contractors who has expressed a definite interest in such work.


G. R. Grove
Section Leader
Research Division

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