# REMINGTON ARMS COMPANY, INC. LONOKE, ARKANSAS 72086

ro: T. C. Douglas

April 1, 1993

From:

F. G. Lopata J. 2014

SUBJECT: MARCH PROG

MARCH PROGRESS REPORT

## **R&D\_LABORATORY:**

The first set of tests to determine the safe storage limits for the day-boxes was done March 8. Two additional test plans were submitted to the Explosives Committee for approval.

An ATF representative inspected Building 612 and stated that it needed a Type 2 indoor magazine before he could give his approval for explosives storage. The magazine has been ordered. As soon as it is delivered and approved, we will move our R&D explosives out of the production magazine and into our area.

### LEAD-FREE PRIMERS:

A chemical components matrix chart has been developed from the patents searched concerning primers. Some recipes for a lead-free primer are being developed as time permits.

The Explosives Committee has approved a one case limit for sleeved primers for the Instrument lab. Primer analysis will begin as soon as methods are developed for our instruments.

# PLANT SUPPORT:

Participation is continuing in the revision of the explosives audit procedures as a member of the primer area team.

Participation is continuing in the Process Safety Management team.

#### CURRENT FRIMER

Examination of each type of manufactured explosive is continuing. The infrared and thermal analysis data from tetrazene indicate it is manufactured consistently. Data for it is no longer being collected by the R&D lab.

Lead styphnate analysis this month was directed at thermal analysis repeatability, resolution of the irregularities found in the decomposition peak, crystal size effects, and the TNR data with respect to its final styphnate products. We can see no crystal size effect on the thermal analysis

# PRIMER MIX FLOWCHART

RAW MATERIALS	CHEMICAL REACTIONS	MIX	CHARGE
ALUMINUM		1	
NITRIC ACID RESORCINOL SODIUM NITRITE MAGNESIUM OXIDE	- TNR - MAGNESIUM STYPHNATE	LEAD STYPHNATE	CF ·
AMINOGUANIDINE BICAR SULFURIC ACID		TETRAZENE	
BARIUM NITRATE ————————————————————————————————————			Lss
PRUSSIAN BLUE			
METALUC S			RF
METALOG 0			
fuel			•
oxidizer			
explosive	· ,		