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THE WURLITZER COMPANY

NORTH TONAWANDA DIVISION
NORTH TONAWANDA NEW YORK

SC-DC-65-1111X

REPORT NUMBER 6

FOR PERIOD ENDING JANUARY 31, 1959

SANDIA PURCHASE ORDER 15-1536 (Item 2)

MC-818 IMPROVEMENT PROGRAM

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW	
1st Review Date: 9/10/96	Determination (Cycle Numbers)
Authority: ☐ ADC ☒ ADD	1. Classification Removed
Name: R. T. Duff	2. Classification Changed to 4
2nd Review Date: 9-10-96	3. Contains No DOE Classified Information
Authority: ADD	4. Contains Wh:
Name: W. Toyne	5. Contains UCAI:
	6. Comments: TCG-SAFF-1 Topic 95.12

Report By: William M. Taylor
William M. Taylor
Senior Engineer

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW DOWNGRADING OR DECLASSIFICATION STAMP	
CLASSIFICATION CHANGED TO: U	AUTHORITY: R.T. Duff
Emelda Seph 9/12/96	RECORD ID: 96SN499
PERSON CHANGING MARKING & DATE: W Toyne 9-12-96	
PERSON VERIFYING MARKING & DATE	DATED: 9-10-96

Reviewed By: Ralph T. Mead
Ralph T. Mead
Chief Engineer
Defense Products
Engineering Department

Approved By: A D Arsem
A. D. Arsem
Manager
Engineering & Research

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INTRODUCTION

This report covers the experimental work on the MC-818 Battery as authorized under purchase order 15-1536, Item 2 Relative to Substitutes for Asbestos.

This report covers work completed from January 1, 1959 thru January 31, 1959.

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SUMMARY

Postmortem of Group "G" and Group "F" units (Lot ST-239), showed slight discoloration of the wrapper and lead insulator. The wrappers in all but G-3 were in pieces and pushed down toward the bottom of the can. This can be blamed on the thickness of the substitute as compared to the original asbestos part, resulting in difficulty in assembling spiral into can. The liner in G-3 was still intact and showed no evidence of moisture on the outside surface.

In spite of the condition of the liners in these units, the firing results showed improved activated life and comparable activation time and peak voltage in relation to standard production units.

A repeat of these two groups will be made with particular emphasis on the thickness of the substitute parts.

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PROCEDURE

This test consisted of two groups of four units each identified as F-1 thru F-4 and G-1 thru G-4, Lot ST-239.

In Group "F", the substitutes for the asbestos wrapper (80229) and the negative lead insulator (80315) were fabricated from the following formula and pressed to .036" thickness.

Quartz	-	15 grams
Veegum	-	6 grams
Fiberglass	-	2 grams

The substitute for the silastic liner (80294) was fabricated from the following formula and pressed to .090" thickness.

Quartz	-	35 grams
Veegum	-	12 grams
Fiberglass	-	5 grams

In Group "G", the substitutes for the asbestos wrapper (80229) and the negative lead insulator (80315) were fabricated from the following formula and pressed to .040" thickness.

Fiberfrax	-	20 grams
Veegum	-	6 grams
Fiberglass	-	2-1/2 grams

The substitute for the silastic liner (80294) was fabricated from the following formula and pressed to .075" thickness.

Fiberfrax	-	30 grams
Veegum	-	9 grams
Fiberglass	-	4 grams

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THE WURLITZER COMPANY
NORTH TONAWANDA, NEW YORK

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MODEL MC-818

MANUFACTURING DATA

LOT NO. ST-239

Serial No.	Code No.	Date Mfg.	Bi-Metal Lot No.	Electrolyte Lot No.	Stack Pad Lot No.	Weight (Grms) Stack Pads	Weight (Grms) Cell Stack	Stack and Pad Inspector	Time	Final Drying Temp.	Final Drying Oven No.	Final Drying Date Removed	Prefusion Peak Voltage	Prefusion Loaded Voltage	Remarks
	1958														
MH F-1	12/2	663	252	MPP-852	18.607	79.814	W.T.	15 hr	140	5	12/3	537	490		
MH F-2	"	"	"	"	18.666	79.803	"	"	"	"	"	539	498		
MH F-3	"	"	"	"	18.640	79.584	"	"	"	"	"	537	490		
MH F-4	"	"	"	"	18.599	79.785	"	"	"	"	"	537	485		
MH															
MH G-1	12/2	663	252	MPP-852	18.569	79.594	"	"	"	"	"	537	485		
MH G-2	"	"	"	"	18.652	79.524	"	"	"	"	"	537	489		
MH G-3	"	"	"	"	18.647	79.470	"	"	"	"	"	537	490		
MH G-4	"	"	"	"	18.657	79.654	"	"	"	"	"	537	486		
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THE WURLITZER COMPANY
NORTH TONAWANDA DIVISION

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MODEL MC-818

NON-DESTRUCTIVE TEST DATA

LOT No. ST-239

SERIAL No.	SERIAL CODE	DATE TESTED	SQUIB RESISTANCE SQ. 1 (OHMS)	SQUIB RESISTANCE SQ. 2 (OHMS)	LEAKAGE (MICROAMPS) (1) +	(2) SQ. 1	(3) SQ. 2	(10) −	PRESSURE LEAK TEST	POLARITY TEST	INSPECTOR	REMARKS
MH- F-1		12/5/58	1.28	1.29	1	1	1	1			J.G.	
MH- F-2		"	1.27	1.28	1	1	1	1			"	
MH- F-3		"	1.24	1.27	1	1	1	1			"	
MH- F-4		"	1.25	1.27	1	1	1	1			"	
MH- G-1		"	1.30	1.32	1	1	1	1			"	
MH- G-3		"	1.23	1.30	1	1	1	1			"	
MH- G-4		"	1.27	1.28	1	1	1	1			"	
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THE WURLITZER COMPANY

NORTH TONAWANDA, N. Y.

DESTRUCTIVE TEST DATA

MODEL NO. MC-818

LOT NO. ST-239

SERIAL NO.	TEST PARAGRAPH	TEMPERATURE F.	LOAD MICROFARADS	SHUNT RES. MEGOHMS	SQUIB USED	TEST DATE 1958	ACTIVATION TIME SECONDS	VOLTAGE AT 4 SECONDS	PEAK VOLTAGE	ACTIVATED LIFE SECONDS	TESTED BY	[redacted] REMARKS
MH F-1	2.7.1.3	-165	210	.440	TS	12/8	.58	468	475	360	E.D.	
MH F-3	"	"	"	"	BS	"	.57	465	474	361	"	
MH G-1	"	"	"	"	TS	"	.56	465	467	345	"	
MH G-3	"	"	"	"	BS	"	.56	466	475	367	"	
MH												
MH F-2	2.7.1.2	-65	210	1.20	TS	"	1.01	487	497	200	"	
MH F-4	"	"	"	"	BS	"	1.01	483	498	186	"	
MH G-4	"	"	"	"	TS	"	.97	487	498	201	"	
MH												Note: Unit G-2 was damaged in rolling in header and was scrapped.
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