

**ENGINEERING CHANGE PROPOSAL (ECP), PAGE 1 of 4**

1. DATE (YYMMDD)  
02-06-19

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503  
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THIS CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM.

2. PROCURING  
ACTIVITY NO.

R2K2032

3. DODAAC

4. ORIGINATOR

a. TYPED NAME (FIRST, MIDDLE INITIAL, LAST)

Amy J. Kreoll

b. ADDRESS (STREET, CITY STATE, ZIP CODE)

U.S. ARMY, TACOM-ARDEC  
AMSTA-AR-WEP

PICATINNY ARSENAL, NJ 07806-5000

5. CLASS OF ECP.

II

6. JUST. CODE

C

7. PRIORITY

R

8. ECP DESIGNATION

a. MODEL/TYPE

Miscellaneous 60mm  
Mortar Ammo

b. CAGE CODE

19200

c. SYSTEM DESIGNATION

Miscellaneous 60mm Mortar Ammunition

9. BASELINE AFFECTED

FUNCTIONAL

PRODUCT

ALLOCATED

d. ECP NO.

R2K2032

e. TYPE

F

f. REV

10. OTHER SYS.CONFIG. ITEMS AFFECTED

YES

NO

11. SPECIFICATIONS AFFECTED

a. SYSTEM	CAGE Code	Specification / Document No.	Rev	SCN	12. DRAWINGS AFFECTED			
					CAGE Code	Number	Rev	Nor
b. DEVELOPMENT					19200	D9299245	J	1
c. PRODUCT					19200	D9299245	L	2
					19200	C9299247	N	3

13. TITLE OF CHANGE

Correct Dimensional Line Exclusion; Update Material Requirements; Remove Sole Source Requirement; Update Vendor Addresses

14. CONTRACT NO. AND LINE ITEM

DAAE30-02-C-1005

DAAE30-02-C-1004

15. PROCURING CONTRACTING OFFICER

a. NAME (FIRST, MIDDLE INITIAL, LAST)

Ann Tierney

b. CODE

c. TELEPHONE NO. 973-724-4526

16. CONFIGURATION ITEM NOMENCLATURE

60mm Mortar Cartridge Family

17. IN PRODUCTION

YES

NO

18. ALL LOWER LEVEL ITEMS AFFECTED

a. NOMENCLATURE

Support Assembly

b. PART NO.

9299245

c. NSN

19. DESCRIPTION OF CHANGE

Addition of dimension and line. Replacement of Sources of Supply. Deletion of a Sole Source requirement. Modification of material properties.

20. NEED FOR CHANGE

See continuation sheet 2 of 2.

21. PRODUCTION EFFECTIVITY BY SERIAL NUMBER

None

22. EFFECT ON PRODUCTION DELIVERY SCHEDULE

None

23. RETROFIT

a. RECOMMENDED ITEM EFFECTIVITY

N/A

b. SHIP / VEHICLE CLASS AFFECTED

N/A

c. ESTIMATED KIT DELIVERY SCHEDULE

N/A

d. LOCATIONS OR SHIP / VEHICLE NUMBERS AFFECTED

N/A

24. ESTIMATED COSTS / SAVINGS UNDER CONTRACT

NONE

25. ESTIMATED NET TOTAL COSTS / SAVINGS

NONE

26. SUBMITTING ACTIVITY

a. AUTHORIZED SIGNATURE

*A. Kreoll*

b. TITLE

Acting Supervisory Packaging Engineer

27. APPROVAL / DISAPPROVAL

a. CLASS I

APPROVAL RECOMMENDED

DISAPPROVAL RECOMMENDED

b. CLASS II

APPROVED

DISAPPROVED

c. CLASS III

CONCUR IN CLASSIFICATION OF CHANGE

DO NOT CONCUR IN CLASSIFICATION OF CHANGE

d. GOVERNMENT ACTIVITY

AMSTA-AR-FSA-M

e. SIGNATURE

*[Signature]*

f. DATE SIGNED (YYMMDD)

20020722

g. APPROVAL

APPROVED

DISAPPROVE

0

h. GOVERNMENT ACTIVITY

i. SIGNATURE

j. DATE SIGNED (YYMMDD)

DD Form 1692, Continuation Sheet 2 of 2, Block 20, "NEED FOR CHANGE":

—Addition of End Dimension Line on Dwg. 9299245: The right vertical line to close out the overall dimension of the support was inadvertently left off of the assembly drawing. Addition of this line will correct the prior error.

—Replacement of one Source of Supply on Dwg. 9299246: One source of supply currently on the drawing, ONICO PLASTICS, is no longer in business. FIVE STAR MOLDING, who bought out ENCOR, a previous producer of this part for Pine Bluff Arsenal, has continued to be the supplier for PBA and has proven their capability to produce quality products. The addition of this manufacturer's name to the drawing would give future bidders on 60mm Mortar ammo contracts an advantage in contacting a known supplier with an existing mold.

—Deletion of Sole Source Requirement/ Replacement of Sources/Revision of Material Properties on Dwg. 9299247: GENERAL FOAM, the suggested source of supply for the foam material listed on the drawing, was bought out by a company named FOAMEX. FOAMEX does not produce foam that falls within the property value ranges for all characteristics. NEW INDUSTRIAL FOAM CORP, the Approved Source of Supply for this part, is a fabricator who's only foam supplier is FOAMEX. Given the fact that this is a very simple part to produce and there is no historical basis to preclude seeking out alternate fabricators/material suppliers, removal of the Sole Source designation is both technically sound and cost effective.

Many factors were considered in seeking out new sources. An examination of historical ECP data on this part revealed that the most important characteristics of the foam are the density values, indentation force deflection (IFD) values, the compression set value, and the polyether constituent. Previously a polyester polyurethane material was used and found to be incompatible with the increments. The current .77-.95 lbs./cu ft density requirement and 28 – 34 psi IFD range is a dramatic reduction of the original minimum 2.0 lbs./cu ft density and minimum 90 psi IFD value. This change occurred in 1999 as a result of reports that the high density foam did not compress adequately to allow ease of removal of the rounds from the fiber container (i.e. the rounds were becoming jammed in the tube, reference ECP R9K2015). The 10% maximum loss of compression set at 50% or 90%\* is critical to ensuring that the foam is resilient over time to adequately immobilize the propelling charges. All of the fabricators to be listed on the drawing as proposed in this ECP have verified that they are able to deliver a product within the ranges specified.

\* The percent of compression was changed from 50% to 90% (yet retained the 10% max loss value) in ECP R9K2015 due to the data sheet that was provided by General Foam for the Grade 35000 product of lower density. All specs that have been submitted by current producers show testing being done at 50% compression with a reported loss value. Further research revealed that compression to 50% of the original material height is an industry standard due to the intended application of the products and the practical compression to be experienced in use. A technical expert at the American Polyurethane Association verified that compression set is a function of the overall molecular structure of the foam and variance in percent of loss at 50% and 90% compression is nearly undetectable. A foam that is compressed to 50% of its height and returns to within 10% of its original height will also return to this same condition when compressed to a greater percentage as the set of the molecular structure (or the ability of those molecules to return to their original shape/position) is a near constant.

NOTICE OF REVISION (NOR)		1. DATE (YYMMDD)	Form Approved OMB No. 0704-0188
THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED.		02-05-19	
Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503			2. PROCURING ACTIVITY NO.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THIS CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM.			R2K2032
			3. DODAAC
4. ORIGINATOR		5. CAGE CODE	6. NOR NO.
a. TYPED NAME (First, Middle Initial, Last)	b. ADDRESS (Street, State, Zip Code)	18200	1 of 3
Amy J. Kreoll	U.S. ARMY, TACOM-ARDEC AMSTA-AR-WEP PICATINNY ARSENAL, NJ 07806-5000	7. CAGE CODE	8. DOCUMENT NO.
9. TITLE OF DOCUMENT		18200	D9299245
SUPPORT ASSEMBLY	10. REVISION LETTER	11. ECP NO.	
	a. CURRENT	b. NEW	R2K2032
	J	K	
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES		NOR SHT	ECP PAGE
60mm MORTAR CARTRIDGE FAMILY		1 of 1	3 of 5
13. DESCRIPTION OF REVISION			
<p>ZONE D-4, Pictorial of Support Assembly:</p> <p>ADD: End dimension line for overall (3.25 ± .06) call-out</p>			
14. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X one)	(1) Existing document supplemented by this NOR may be used in manufacture.		
	(2) Revised document must be received before manufacturer may incorporate this change.		
	(3) Custodian of master document shall make above revision and furnish revised document.		
b. ACTIVITY AUTHORIZED TO APPROVED CHANGE FOR GOVERNMENT		c. TYPED NAME (First, Middle Initial, Last)	
d. TITLE	e. SIGNATURE	f. DATE SIGNED (YYMMDD)	
15.a. ACTIVITY ACCOMPLISHING REVISION	b. REVISION COMPLETED (Signature)	c. DATE SIGNED (YYMMDD)	
AMSTA-AR-WEP, Packaging Division			

NOTICE OF REVISION (NOR)		1. DATE (YYMMDD)	Forms Approved OMB No. 0704-0188
THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED.		02-05-19	
<small>Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503</small> <b>PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THIS CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM.</b>			2. PROCURING ACTIVITY NO.  R2K2032
			3. DODAAC
4. ORIGINATOR	b. ADDRESS (Street, State, Zip Code)	5. CAGE CODE	8. NOR NO.
a. TYPED NAME (First, Middle Initial, Last)  Amy J. Kreoff	U.S. ARMY, TACOM-ARDEC AMSTA-AR-WEP PICATINNY ARSENAL, NJ 07806-5000	19200	2 of 3
		7. CAGE CODE	8. DOCUMENT NO.
		19200	D9299245
9. TITLE OF DOCUMENT	10. REVISION LETTER		11. ECP NO.
SPACER	a. CURRENT	b. NEW	R2K2032
	L	M	
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES		NOR SHT	ECP PAGE
60mm MORTAR CARTRIDGE FAMILY		1 of 1	4 of 5
13. DESCRIPTION OF REVISION			
<p>ZONE D-8, Note 3 "SUGGESTED SOURCES OF SUPPLY":</p> <p>DELETE "ONICO PLASTICS" Information in it's entirety and REPLACE with:</p> <p>"FIVE STAR MOLDING 1339 CONTINENTAL DRIVE EAU CLAIRE, WI 54701"</p>			
14. THIS SECTION FOR GOVERNMENT USE ONLY			
a. (X one)	(1) Existing document supplemented by this NOR may be used in manufacture. (2) Revised document must be received before manufacturer may incorporate this change. (3) Custodian of master document shall make above revision and furnish revised document.		
b. ACTIVITY AUTHORIZED TO APPROVED CHANGE FOR GOVERNMENT		c. TYPED NAME (First, Middle Initial, Last)	
d. TITLE	e. SIGNATURE		f. DATE SIGNED (YYMMDD)
15.a. ACTIVITY ACCOMPLISHING REVISION AMSTA-AR-WEP, Packaging Division	b. REVISION COMPLETED (Signature)		c. DATE SIGNED (YYMMDD)

NOTICE OF REVISION (NOR) THIS REVISION DESCRIBED BELOW HAS BEEN AUTHORIZED FOR THE DOCUMENT LISTED.		1. DATE (YYMMDD) 02-05-19	Form Approved OMB No. 0704-0188				
Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503 <b>PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES. RETURN COMPLETED FORM TO THE GOVERNMENT ISSUING CONTRACTING OFFICER FOR THIS CONTRACT/PROCURING ACTIVITY NUMBER LISTED IN ITEM 2 OF THIS FORM.</b>		2. PROCURING ACTIVITY NO.  R2K2032					
		3. DODAAC					
		6. NOR NO. 3 of 3					
4. ORIGINATOR a. TYPED NAME (First, Middle Initial, Last) Amy J. Kreoll	b. ADDRESS (Street, State, Zip Code) U.S. ARMY, TACOM-ARDEC AMSTA-AR-WEP PICATINNY ARSENAL, NJ 07806-5000	5. CAGE CODE 19200	8. DOCUMENT NO. D9298247				
9. TITLE OF DOCUMENT SUPPORT		7. CAGE CODE 19200	11. ECP NO. R2K2032				
12. CONFIGURATION ITEM (OR SYSTEM) TO WHICH ECP APPLIES 60mm MOTRAR CARTRIDGE FAMILY		10. REVISION LETTER					
		a. CURRENT M	b. NEW N				
13. DESCRIPTION OF REVISION		NOR SHT 1 of 1	ECP PAGE 5 of 5				
<p>DELETE "SOURCE CONTROL DRAWING" DESIGNATION AND NOTES "3" and "4" of the drawing in their entirety.</p> <p>ZONE C-4, NOTE 2:</p> <p>CHANGE "TEST VALUE" FOR "DENSITY": FROM: ".77 - .97" TO: ".75 - 1.05"</p> <p>CHANGE "COMPRESSION SET" Test Procedure Information: FROM: "90%, 22 HRS, 158° F" TO: "50%, 22 HRS, 158° F"</p> <p>ZONE B-4: DELETE "NOTE 2 B" in its entirety and REPLACE with:</p> <p>"B. SUGGESTED SOURCES OF SUPPLY:</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">           AMERICAN CONVERTORS, INC 5360 MAIN STREET N.E. FRIDLEY, MN 55421         </td> <td style="width: 50%; border: none;">           BEMEL INDUSTRIES 3730 KIEST BLVD DALLAS, TX 75203"         </td> </tr> <tr> <td style="border: none;">           MERRY WEATHER FOAM, INC 11 BROWN STREET BARBERTON, OH 44203         </td> <td style="border: none;">           UFP TECHNOLOGIES 172 EAST MAIN STREET GEORGETOWN, MA 01833         </td> </tr> </table>				AMERICAN CONVERTORS, INC 5360 MAIN STREET N.E. FRIDLEY, MN 55421	BEMEL INDUSTRIES 3730 KIEST BLVD DALLAS, TX 75203"	MERRY WEATHER FOAM, INC 11 BROWN STREET BARBERTON, OH 44203	UFP TECHNOLOGIES 172 EAST MAIN STREET GEORGETOWN, MA 01833
AMERICAN CONVERTORS, INC 5360 MAIN STREET N.E. FRIDLEY, MN 55421	BEMEL INDUSTRIES 3730 KIEST BLVD DALLAS, TX 75203"						
MERRY WEATHER FOAM, INC 11 BROWN STREET BARBERTON, OH 44203	UFP TECHNOLOGIES 172 EAST MAIN STREET GEORGETOWN, MA 01833						
14. THIS SECTION FOR GOVERNMENT USE ONLY							
a. (X one)	<input type="checkbox"/> (1) Existing document supplemented by this NOR may be used in manufacture. <input type="checkbox"/> (2) Revised document must be received before manufacturer may incorporate this change. <input checked="" type="checkbox"/> (3) Custodian of master document shall make above revision and furnish revised document.						
b. ACTIVITY AUTHORIZED TO APPROVED CHANGE FOR GOVERNMENT		c. TYPED NAME (First, Middle Initial, Last)					
d. TITLE	e. SIGNATURE	f. DATE SIGNED (YYMMDD)					
15.a. ACTIVITY ACCOMPLISHING REVISION AMSTA-AR-WEP, Packaging Division	b. REVISION COMPLETED (Signature)	c. DATE SIGNED (YYMMDD)					