



Flight, Safety, Special Purpose, Shipboard Clothing & CBRN



DLA
DEFENSE LOGISTICS AGENCY
Established 1961



The Nation's Combat Logistics Support Agency

DLA Clothing & Textiles Special Purpose & Chemical Clothing

Robert Singley, IST
Supervisor/Contracting Officer
Nov 17, 2023





TEAM POCs

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Special Purpose Clothing

- Jackets
 - Flyers 36/P & 45P (Sage & Tan) – Limited Demand
 - Leather A-2, G-1, SWO (USAF & USN)
 - Leather, Surface Warfare Officer (USN)
 - Cold Weather Shipboard Jacket
- Multi-Climate Protection System (MCPS)
 - Shirts/Drawers (Silk-Wt, Mid-Wt, Heavy-Wt)
 - Overalls, Vest, Jacket Liners



Special Purpose Clothing

- Army Aircrew Combat Uniform (A2CU)
- Otto Fuel Protective Items
- Wildland Firefighting Shirt, Trousers
- Flight Deck Jerseys/ Flight Deck Trousers
- Anti-Flash Hood / Firefighter Hood
- Neck Gaiter
- Advanced Combat Shirt and Advanced Combat Pant



Special Purpose Clothing

- Flyers – 27/P (Sage & Tan)
- Improved Combat Vehicle Crewmen (ICVC)
- Utility – Green Shipboard / Blue Coverall / Foliage Green
- Navy IFRV Coveralls
- Fuel Handlers Coveralls
- Mechanics Coveralls
- Coverall with Hood & Booties
- Disposable Coverall
- Personal Protective Equipment (Various Items)



Special Purpose Obligations

- Material Obligations
 - FY 20 Actual - \$650.2 Million (Mostly COVID related)
 - FY 21 Actual - \$191.9 Million
 - FY 22 Actual - \$103.4 Million
 - FY 23 Actual - \$112.2 Million

- SALES (@ Standard)
 - FY 20 - \$217.2 Million
 - FY 21 to date - \$678.1 Million (Majority for COVID PPE)
 - FY 22 - \$140.8 Million
 - FY 23 - \$ 118.6 Million



Chemical Protective Clothing Product Line Overview

- Overboots, Molded, Lightweight, Chemical/Biological Protective (MALO)
- Gloves – Butyl, JB2GU, Glove Inserts
- Toxicological Agent Protective Items (TAP) – Inactive except 35mil glove
- Joint Service Lightweight Integrated Suit Technology (JSLIST) – Mandatory
- Joint Protective Aircrew Ensemble (JPACE), Lightweight Joint Protective Air Crew Ensemble (LJPACE) Male & Female and Repair Kits
- Chemical Protective Helmet Covers - Mandatory
- Carrying Bag (for JSLIST) – Mandatory
- Neck Dam - Mandatory



Chem Product Line Overview

- Items currently procured are for Warfighters only.
- Items subject to International Traffic in Arms Regulations (ITAR).
- DLA two major customers:
 - Individual Chemical Equipment Management Program (ICEMP). Office provides centralized management and funding of U.S. Army chemical individual protective equipment.
 - Military Service War Reserve Stocks.



Chemical Obligations/Sales

- Material Obligations –
 - FY 20 Actual - \$33 Million
 - FY 21 Actual - \$33.8 Million
 - FY 22 Actual – \$42.4 Million
 - FY 23 Actual - \$ 25.6 Million

- SALES (@ Standard) –
 - FY 20 - \$122.6 Million
 - FY 21 - \$46.8 Million
 - FY 22 - \$83.8 Million
 - FY 23 - \$54 Million



PRODUCT DEMONSTRATION MODELS (PDMs)

- Product Demonstration Models
 - Product Demonstration Models (PDMs) are required to be submitted through traceable means via the U.S. Postal Service or a Commercial Carrier (Example: FedEx, Airborne, UPS, DHL, Emery). Due to COVID-19, in-person delivery of PDMs by offerors is not authorized. The Tracking Number shall be provided as part of the DIBBS electronic upload proposal submission.
 - PDMs are to be delivered between 8:00 a.m. and 1:00 p.m. E.S.T., Monday through Friday, except for legal federal holidays as set forth in 5 USC 6103. Packages must be plainly marked **ON THE OUTSIDE OF THE CARRIER'S PACKAGE** with the solicitation number, date, and time set forth for receipt of offers as indicated in block 9 of the Standard Form 33. Ultimately, it is the offeror's responsibility to ensure that its PDMs are received at the correct location at the correct time. Failure to do so may result in the offeror's proposal being deemed untimely and not considered further for the award per FAR 52.215-1 Instruction to Offerors - Competitive Acquisitions.



PRODUCT DEMONSTRATION MODELS (PDMs)

- All PDMs shall be sent to the following address:

DLA Troop Support
ATT: BUYERS NAME
Building 3-A-4422
700 Robbins Avenue
Philadelphia, PA 19111

- Effective 01 October 2021, all carriers/individuals attempting to deliver any packages/proposals/PDMs/First Articles/etc. to DLA Troop Support shall have present credentials that meet Real ID requirements in order to gain access to make a delivery. **NO EXCEPTIONS SHALL BE MADE.**



Open Solicitations Under Evaluation

- Future solicitations currently being planned. Look at [beta.SAM.gov](https://beta.sam.gov) for future details and Market Research Surveys that will help in the development of our Acquisition Strategies.
1. Coverall, Shipboard, Green - TAD 1/24
 2. Jersey Flight Deck
 - Commercial – TAD 3/24
 - Mandatory– Closes 11/20/23
 3. LJPACE/JPACE – TAD 6/24
 4. JSLIST –Mandatory; due to close end of Nov.
 5. Fuel Handlers Coverall –Mandatory; TAD 1/24
 6. ACP – Mandatory; TAD 1/24



Upcoming Opportunities Solicitations Yet to be Issued

- Future solicitations currently being planned. Look at [beta.SAM.gov](https://beta.sam.gov) for future details and Market Research Surveys that will help in the development of our Acquisition Strategies.
1. ACS –
 - Commercial -12/23
 - Mandatory Solicitation - 12/23
 2. Shirt, Flame Resistant, Aramid (Yellow Fireman's Shirt) – 1/24
 3. Pant's FR Sage Green Aramid Spruce Type 1 – 2/24
 4. Jacket, Flyer's – 2/24 (low demand reported by industry minimum)
 5. MALO – Solicitation 4/24
 6. 27P Coverall – 4/24
 7. A2CU Female, Unisex, Maternity – 6/24





DLA
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The Nation's Combat Logistics Support Agency

DLA Clothing & Textiles Flight / Safety

Jennifer Scarpello
IST Chief
Safety Gear Team
November 16, 2023





DLA C&T Mission

Provide world-class integrated logistics solutions for clothing, individual equipment and textile items to Warfighters and Emergency Responders in peace and in war, around the clock and around the world.





Product Line Overview

- Safety Team Stats

- Overall manage approx. 900 different items

- Items include:

- Flyers Helmets and components (Visors, Chin Straps, ...)
 - Anti-G Garments
 - Anti-Exposure Garments
 - Ballistic Helmets and components (Retention Systems, Pad (Suspension) Systems, Covers)

- Sales

- FY 23 - \$62.7M
 - FY 22 - \$66.2M
 - FY 21 - \$67.7M
 - FY 20 - \$82.0M





Open Procurements

- **Air Solider System (AIR SS) Primary Survival Gear Carrier (PSGC) Vest**
 - 100% Small Business Solicitation
 - Fixed Quantity (1,800 units)
 - SPE1C1-24-R-0006 Solicitation Open, Closes on 12/4/23
 - POC: Lisa Pizzo





Open Procurements

- **Anti-Gravity Suits, CSU-13 B/P & CSU-15 A/P**
- Unrestricted Solicitation
- Indefinite Delivery, Indefinite Quantity (IDIQ) 4-Year Tier Contract
- SPE1C1-24-R-0001 Projected Solicitation Open December 2023
- POC: Bob Rounay





Future Procurements

- **Cap Set, Helmet (68P)**
 - 100% Small Business Set-Aside
 - IDIQ Five (5) year tier
 - Projected solicitation 2Q2024
 - POC: Bob Rounay
- **Coverall Flyers, CWU 86/P and Coveralls Flyers, CWU-87/P**
 - Qualified Product List item (QPL)
 - Unrestricted Solicitation
 - IDIQ Five (5) year tier
 - Projected solicitation 2Q2024
 - POC: Lisa Pizzo



Future Procurements

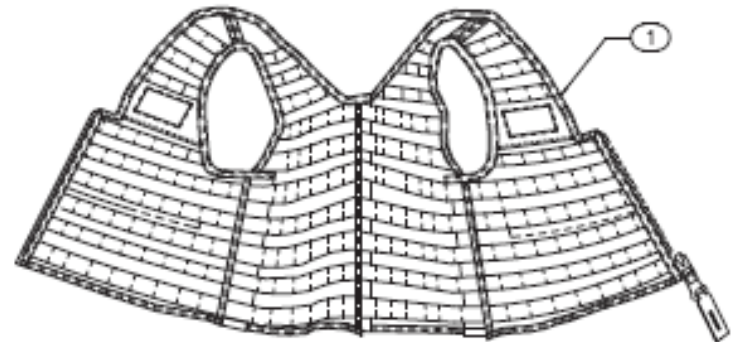
- **Survival Vest AIRSAVE**

- 100% Small Business Set-Aside
- IDIQ Four (4) year tier
- Projected solicitation 3Q2024

*** Market Research to combine all or make separate contracts

- **7 Components:**

- Horizontal Panel
- Expansion Panel (Small & Large)
- General Pocket (Small & Large)
- Radio Pocket
- CRU/JHMCS Attachment
- HMIT Attachment





Future Procurements

- **Advanced Technology Anti-G Suit – (ATAGs) CSU-23P**

- Unrestricted Solicitation
- IDIQ Three (3) year tier
- Projected solicitation 2Q2024
- Item required ESA approval
- ESA Approval/FAT Testing after award
- Connector – War Stopper item
- Market Research January/February 2024

POC: Mara Cremen





Safety Team Points of Contact

- Michael Medora: Division Chief
 - michael.medora@dla.mil
 - 215-737-3274
- Jennifer Scarpello: IST Supervisor
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 - Natalie Wilson Natalie.wilson@dla.mil





**GO
BIRDS!!!**

***Thank
You
for
Your
Support***





AF Uniform Office Flight Duty Uniform/ Utility Uniform Programs

JAPBI Nov 2023

Andrea Lemke
Air Force Uniform Office
Clothing Designer
Andrea.lemke.1@us.af.mil



Maternity Advanced Aircrew Combat Uniform (A2CU)

AFLCMC... Providing the Warfighter's Edge



OVERALL DESIGN

- **Utilized fabric & design from current A2CU/A2CU-F**
 - Known testing & performance results
 - Creates consistency in field
- **Designed to accommodate room in belly & hips without creating a large overall appearance**
- **Safe-to-Fly Flash Flame requirements**
 - Cinch bottom hem with bungee cord & barrel lock to avoid chimney effect
 - Tuck extra cording into interior hook & loop pocket to avoid snag hazard

COAT DESIGN

- Princess seaming for shape
- Longer length for growth
- Bungee cord with barrel lock at bottom hem for safety
- All pockets as per A2CU-F except for Microclimate Cooling Garment (MCG) opening, which was removed due to garment real estate

TROUSER DESIGN

- Trousers contain FR stretch belly panel with elastic waistband, which accommodates all stages of pregnancy
- All pockets remain as per A2CU-F except for the side hanging hip pocket closure (A2CU-F has two pieces of hook/loop closure, whereas the Maternity A2CU has one)



Maternity A2CU Design Cont.



AFLCMC... Providing the Warfighter's Edge

Final House Proto of Maternity A2CU



FRONT

SIDE

BACK



**BELLY PANEL
FRONT**



**BELLY PANEL
SIDE**



**BELLY PANEL
BACK**

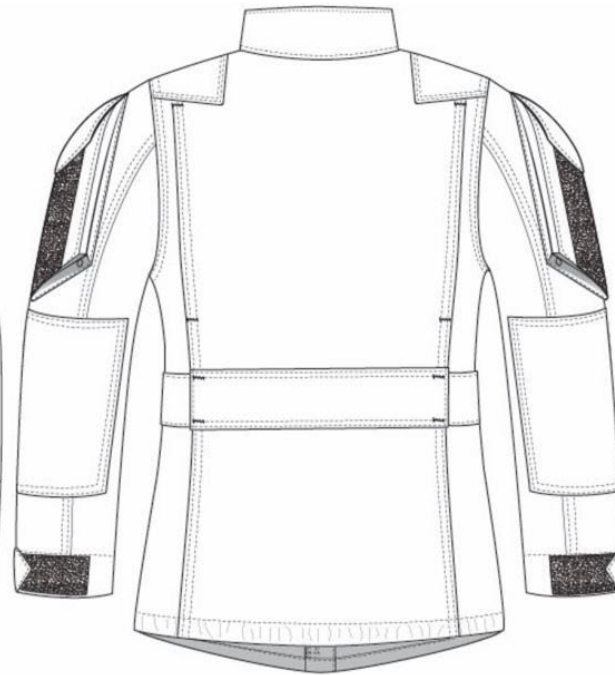


Maternity A2CU Coat Illustrations

AFLCMC... Providing the Warfighter's Edge

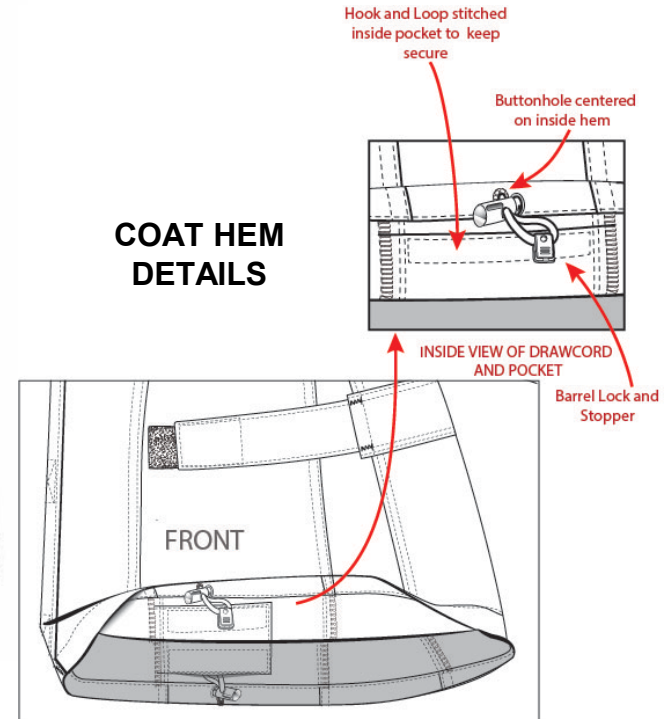


FRONT



BACK

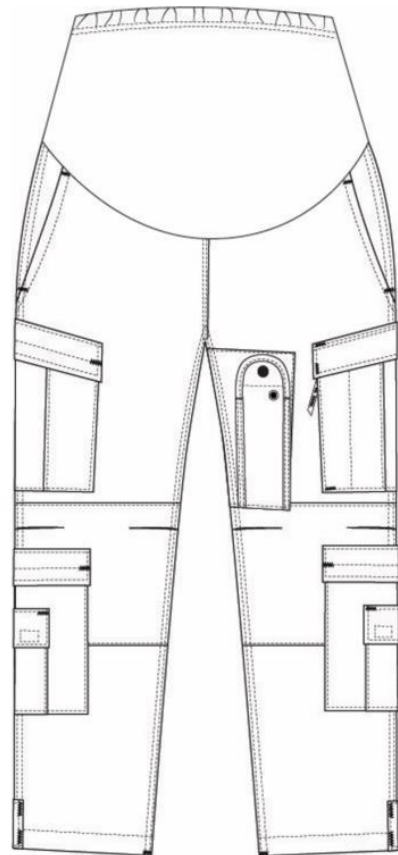
COAT HEM DETAILS



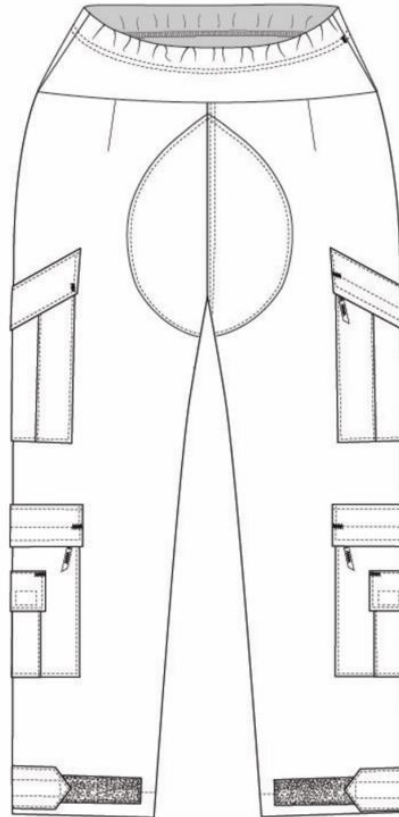


Maternity A2CU Trouser Illustrations

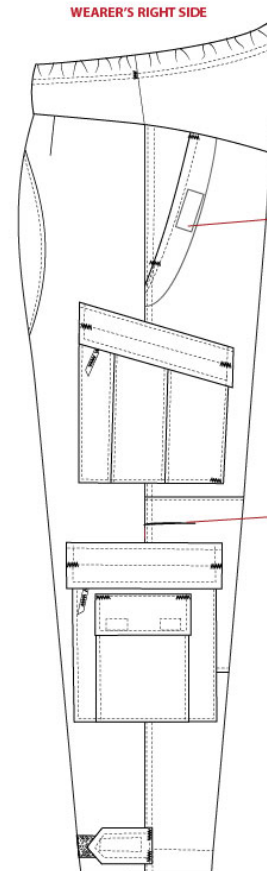
AFLCMC... Providing the Warfighter's Edge



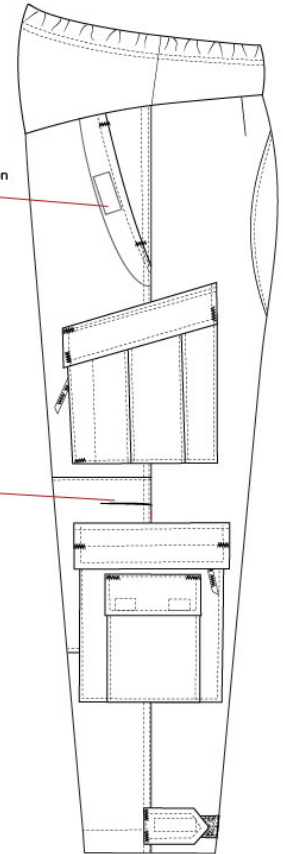
FRONT



BACK



WEARER'S RIGHT SIDE



WEARER'S LEFT SIDE

Hook and loop are on the inside of the pocket.

Pleat

SIDE



Way Forward

AFLCMC... Providing the Warfighter's Edge



Design & Development

- **Tactical Hat**
- **Improved Hot Weather Combat Uniform (IHWCU) fit eval**
- **Size Standardization Effort with the Sister Services**
 - A2CU
 - A2CU-F
 - IHWCU
- **Utility material research**
 - Updated technology –
 - Comfort properties
 - Durability improvements
 - PFAS Alternatives



Tactical Cap

AFLCMC... Providing the Warfighter's Edge



Background

- The OCP Tactical Cap is a new item to be issued through DLA and available as an optional item at AAFES.
 - Fit Test completed 26-30 Jun 2023
 - Wear Test completed 31 Aug 2023

Potential Improvements

- Wicking sweatband with No Melt/No Drip
- Elastic stretch between sewn panels
- Odor/Bacteria Control





Questions?

AFLCMC... Providing the Warfighter's Edge





NAVAL SUPPLY SYSTEMS COMMAND
NAVY EXCHANGE SERVICE COMMAND

Improved-Improved Flame-Resistant Coveralls (I2FRV)

NAVSUP Navy Logistics Productivity (NLP) Program

Presented to:

Joint Advanced Planning Brief for Industry (JAPBI)

Presented by:

Magdalena Mulherin

Clothing Designer

Navy Clothing and Textile Research Facility

16 November 2023

CUI



Controlled by: Dept of Navy
Controlled by: NCTRF
Categories: CTI
Dissemination: FEDCON
POC: Magdalena Mulherin
508-206-2740

IMPROVED- IMPROVED FLAME RESISTANT VARIANT (I2FRV)

FY20-23

NAVSUP R&D NAVY LOGISTICS PRODUCTIVITY (NLP) PROGRAM

OBJECTIVE

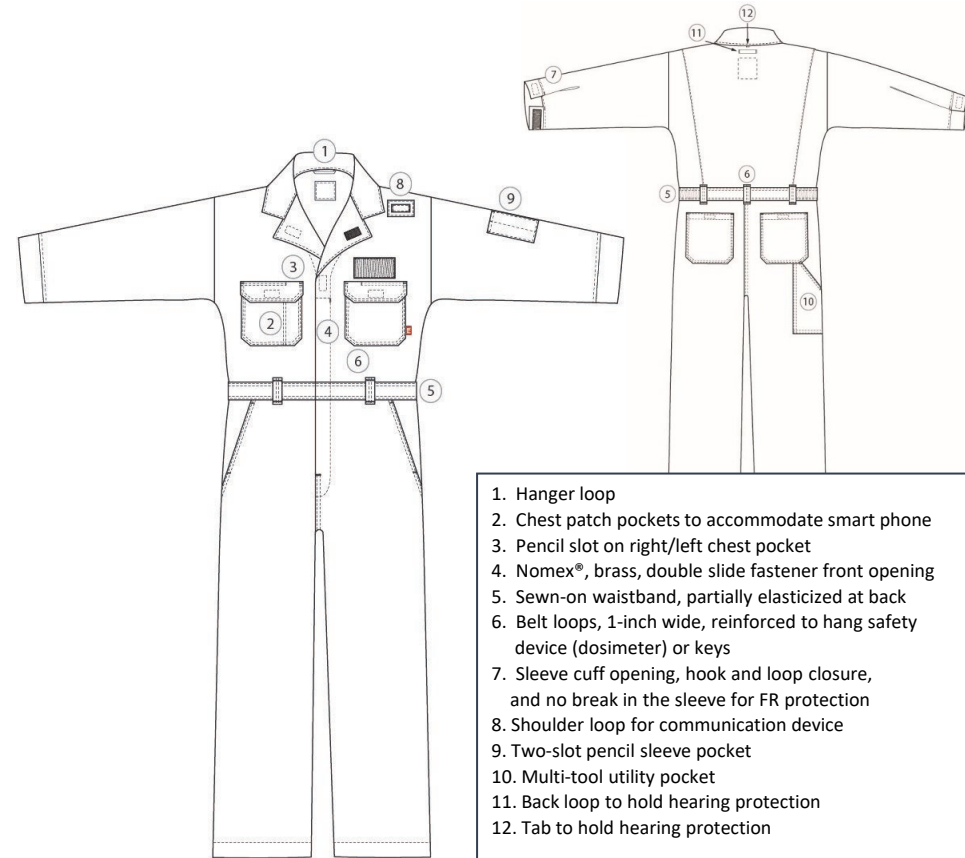
- To consolidate the requirements of all four (4) shipboard flame resistant (FR) coveralls into one (1) coveralls.
- Small scale assessment of the I2FRV coveralls in relevant shipboard environments to provide recommendations.

SCOPE OF WORK

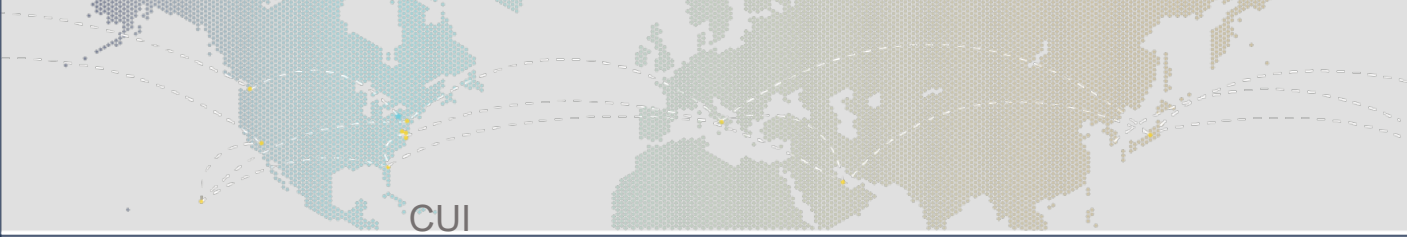
- Material: 88/12% FR Cotton/Nylon, 9.5-10.0 oz./yd² Twill
- Design: "User driven" coveralls
- Testing: 90-Day Limited User Evaluation
U.S. Pacific Fleet (3 platforms)
- Data Collection: Surveys & focus groups

INTEGRATED PROJECT TEAM (IPT) MEMBERS

- NCTRF, NAVSEA, NAVAIR, SURFPAC, SURLANT



1. Hanger loop
2. Chest patch pockets to accommodate smart phone
3. Pencil slot on right/left chest pocket
4. Nomex®, brass, double slide fastener front opening
5. Sewn-on waistband, partially elasticized at back
6. Belt loops, 1-inch wide, reinforced to hang safety device (dosimeter) or keys
7. Sleeve cuff opening, hook and loop closure, and no break in the sleeve for FR protection
8. Shoulder loop for communication device
9. Two-slot pencil sleeve pocket
10. Multi-tool utility pocket
11. Back loop to hold hearing protection
12. Tab to hold hearing protection

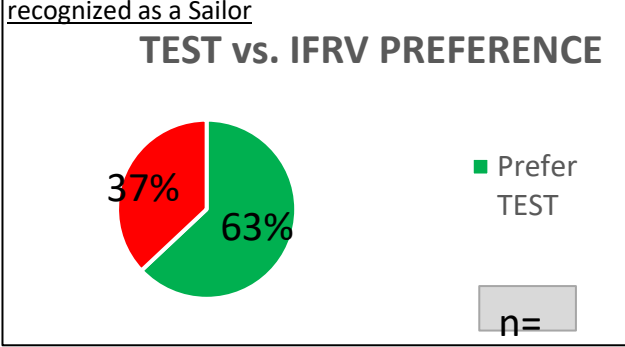


12FRV WEAR EVALUATION FINDINGS

- 12FRV coveralls were preferred by Sailors serving in engineering and damage control spaces because they were more durable, protective, and functional compared to the current IFRV coveralls
- Test coveralls were preferred for appearance, performance, design, material, and fit

12FRV COVERALLS:

- PREFERRED** TEST coveralls out of the eight (8) coveralls worn by Sailors
- PREFERRED** for SHIPBOARD wear over IFRV coveralls
- SUITABLE** for their job
- PERFORMED WELL** during laundering
- POSITIVE** ratings received for all coveralls characteristics
- POSITIVE** ratings received for all design features **EXCEPT** the belt loops
- POSITIVE** perception ratings: Sailors felt professional, received positive feedback, and felt



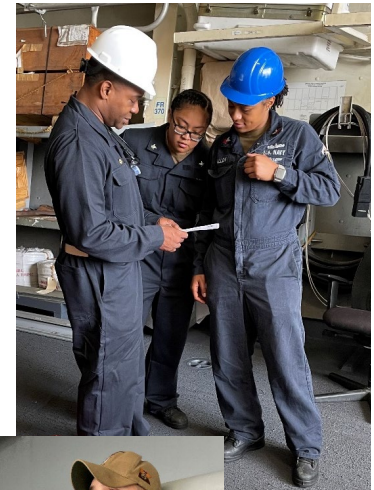
Wear Evaluation, Pearl Harbor, July 2023

I2FRV WAY AHEAD

Recommend full scale I2FRV wear evaluation with design & material improvements:

Identify resource sponsor to:

- Assess I2FRV coveralls in relevant shipboard environments in the East & West Coasts or OCONUS
- Conduct wear test with implemented design and fit changes
- Complete biophysical laboratory testing





NAVAL SUPPLY SYSTEMS COMMAND
NAVY EXCHANGE SERVICE COMMAND

SEAMLESS KNITTING: FLIGHT DECK JERSEY VALIDATION

Small Business Innovation Research (SBIR) &
NAVSUP R&D Navy Logistics Productivity (NLP)
Program

Presented to:
Joint Advanced Planning Brief for Industry (JAPBI)

Presented by:
Magdalena Mulherin
Clothing Designer
Navy Clothing and Textile Research Facility

16 November 2023

READY. RESOURCEFUL. RESPONSIVE

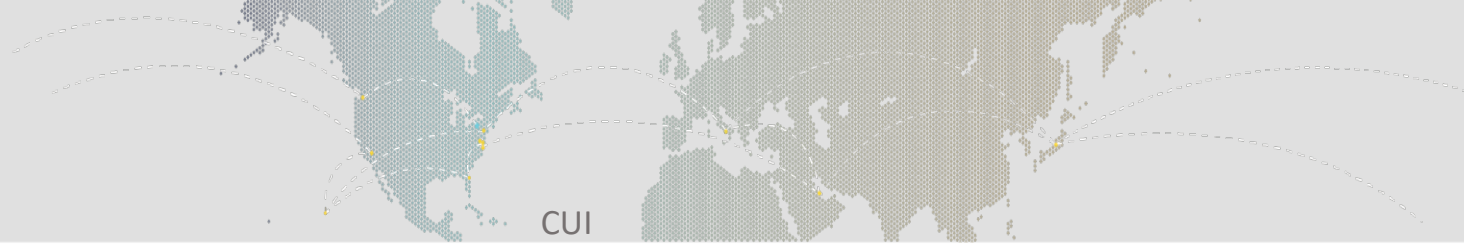
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508-206-2740



NAVAL SUPPLY SYSTEMS COMMAND
NAVY EXCHANGE SERVICE COMMAND



Seamless Knitting - Flight Deck Jersey (FDJ) Validation

FY19-FY23 SBIR Topic N182-124, Phase II OPTION

OBJECTIVE

- To investigate seamless knitting technology capabilities and demonstrate seamless knitting techniques with Flame Resistant and No Melt/No Drip materials into a military protective garment.
- PHASE II: To develop, test, and user-evaluate Flight Deck Jersey (FDJ) seamless knit garments to demonstrate utility of 3D knitting technology

VALUE TO SAILOR

- Improved comfort, fit, air permeability, moisture wicking, chafing & bulk reduction, FR protection
- Waste reduction, time and money savings for the Government

3D KNITTING APPLICATION

- Cold weather base layers, physical fitness uniform items, sensors garment integration

PROGRAM UPDATE

- Survey data collection on USS Nimitz CVN-68
- Compared Stoll vs. Shima 3D knitting equipment capabilities
- Development of commercial item description

INTEGRATED PROJECT TEAM MEMBERS

- NCTRF, NAVAIR, Propel LLC



FEMALE (front): 3D Simulation of FDJ prototypes by Propel LLC, FEB 2022



MALE (front) : 3D Simulation of FDJ prototypes by Propel LLC, FEB 2022



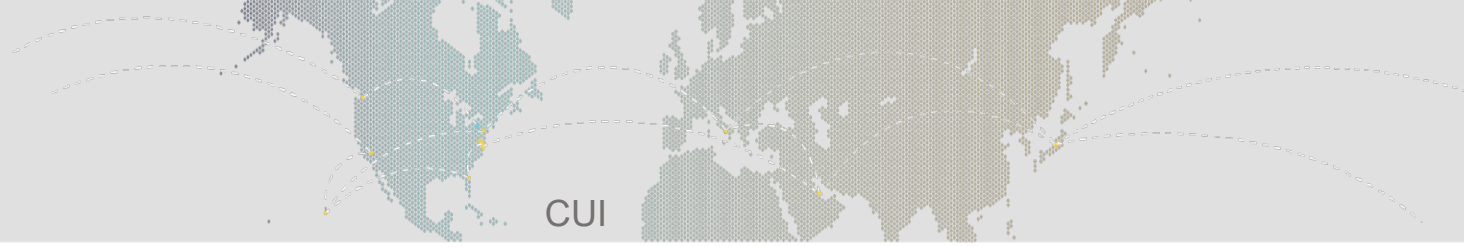
MALE (front) : 3D Simulation of FDJ prototypes in 7 colors by Propel LLC, FEB 2022

SBIR DATA RIGHTS, Topic Number: N182-124, Award No.: N68335-20-C-0279, Contractor Name: Propel LLC, Contractor Address: 999 Main St Unit 106 Pawtucket, RI 02860. Expiration of Data Rights Period: March 19, 2027, The Government's rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software marked with this legend are restricted as provided in paragraph (b)(4) of DFARS 252-227-7018, Rights in Noncommercial Technical Data and Computer Software—Small Business Innovative Research (SBIR) Program.

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NAVAL SUPPLY SYSTEMS COMMAND
NAVY EXCHANGE SERVICE COMMAND



3D FDJ Wear Test

SURVEY DEMOGRAPHICS

- 90-Day Limited User Evaluation (LUE)
- U.S. 7th Fleet deployment, US Indo-Pacific Command (South China Sea)
- 182 TEST PARTICIPANTS
 - 35 female
 - 147 male
- Issued 125 green and 55 yellow
- Two (2) FDJs per Sailor

INTERIM SURVEY DATA RESPONSES

- 3D FDJ was preferred over cut & sew issued FDJ
- Minor improvement recommendations to length and collar construction

PATH FORWARD

- Complete data collection
- Update design (length & collar)
- Investigate dying options for sustainment of all seven FDJ colors

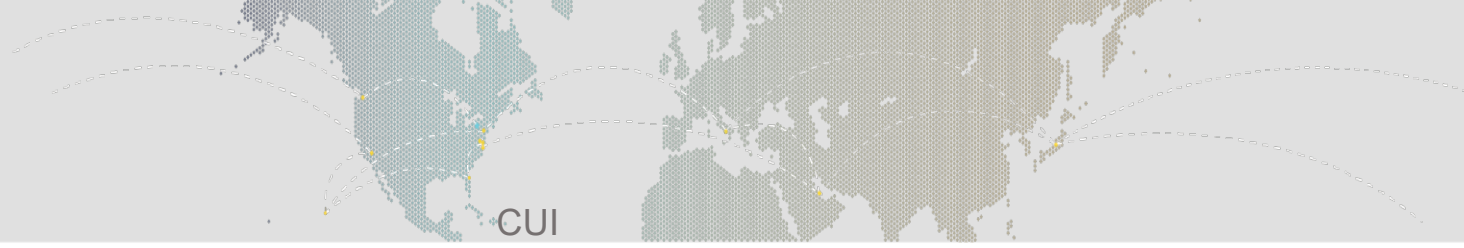


“USS Nimitz conducts flight operations in South China Sea, US 7th Fleet, US Indo-Pacific Command.” Retrieved from Facebook 2FEB23.

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NAVAL SUPPLY SYSTEMS COMMAND
NAVY EXCHANGE SERVICE COMMAND



Standardization for 3D Knit Patterns

DIGITAL PATTERNS

- New way of digitizing patterns
- Require digital code adjustment or reprogramming due to several variables
- Every machine will require a slightly different pattern code

DLA PROCUREMENT

- Vendors may require more time to submit Production Demonstration Models in response to solicitation

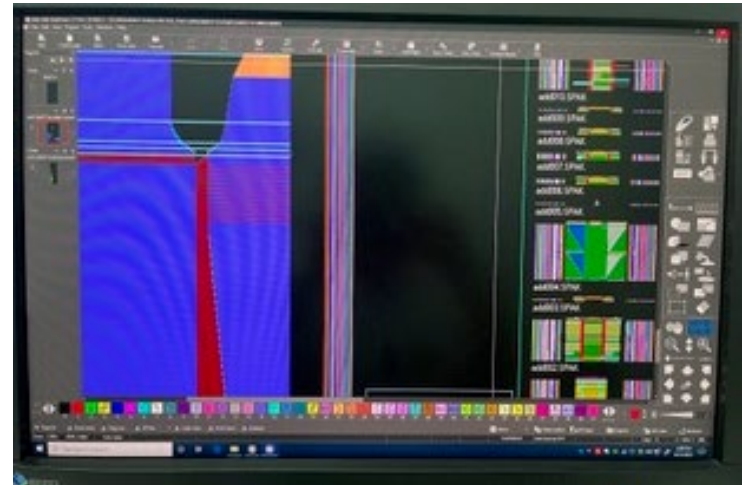


BENEFITS

- 3D knitting is the future for the clothing & textile industrial base
- Less manual labor & a more specialized skill set

CURRENT CHALLENGES

- Specialized yarns
- Machine manufacturer support
- Machinery cost & skilled labor (location & education)



Digital pattern view - Shima Seiki software

CUI