Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Request for Quotation
31 — Public Safety

Proc Folder: 50832
Doc Description: Addendum No. 2 - Responses to vendor questions
Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2014-12-18	2015-01-06 13:30:00	CRFQ 0612 DPS1500000008	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number: Modern Firearms 6601 MacCorkle Ave SE Charleston, WV 25304 ~ WV VENDOR#
Mike Amory Phone: 304-925-0305 Cell: 304-932-9232 Fax: 304-925-3648
FFL: 4-55-039-01-6M-02775 / 100% Woman Owned Small Business (031014-02)
CAGE CODE: 726Q6 / DUNS: 005649370 / EIN: 30-0441280 / E-VERIFY NUMBER 761984

01/06/15 12:52:05
West Virginia Purchasing Division

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
(304) 558-2544
tara.l.lyle@wv.gov

Signature X _____ **FEIN #** 30-0441280 **DATE** 01/05/2015

All offers subject to all terms and conditions contained in this solicitation

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Bullet proof vests	100.00000	EA	$572.00	$57,200.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Level II soft armor 2 carriers, trama pac, STP	WVSP II

Extended Description :

Addendum No. 2 - Responses to vendor questions attached. See attached pages. The bid opening remains on 01/06/2015 at 1:30 pm.

The WV Purchasing Division for the agency, WV State Police, is soliciting bids for an open-end contract to provide body armor for the WV State Police, the WV Division of Natural Resources Police and the WV Division of Protective Services (Capitol Police), per the attached specifications.

Level II Body Armor-See attached specifications

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Bullet proof vests	100.00000	EA	$684.00	$68,400.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival ArmorLevel IIIA soft armor 2 carriers, trama pac, STP		WVSP IIIA

Extended Description :

Level IIIA Body Armor-See attached specifications

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Bullet proof vests	100.00000	EA	$67.95	$6,995.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Tactical Outer Carrier SAMPLED	WVSPTC

Extended Description :
Tactical Outer Carrier

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Bullet proof vests	100.00000	EA	$57.95	$5,795.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Concealable Carrier SAMPLED	WVSPCC

Extended Description :
Concealable Carriers

INVOICE TO	SHIP TO
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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Bullet proof vests	100.00000	EA	$87.00	$8,700.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	GUN SHOT KIT SAMPLED	WVSPSK

Extended Description :
Gunshot Medical Kit affixed to the Body Armor

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

Some of the Agencies using Survival Armor:
Department of Homeland Security, Department of State, Lexington Metro PD (females), Lansing PD, Columbus PD, Franklin Co SO, Hilliard PD, Westerville PD, Upper Arlington PD, Grandview Heights PD, Dublin PD, Perry Twp PD, Gahanna PD, Hocking Co SO, Ohio Univ PD, Athens Co SO, Dayton PD, Dayton Airport PD, Springfield PD, Huber Heights PD, Cincinnati PD, Hamilton Co SO,Mason PD, Delhi Twp PD, Marion Co SO, Delaware PD, Richland Co SO, Canton Fire, North Canton PD,Akron PD, Cuyahoga Falls PD, Richfield PD, Stark Co SO, Ohio State Highway Patrol

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[ ] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[X] Other

Description of Modification to Solicitation:

1. The body armor must meet or exceed the 2014 FBI body armor (ballistics) protocol. If should provide documentation that armor meets or exceeds the 2014 FBI protocol prior to contract award.

2. The bid opening remains on 01/06/2015 at 1:30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

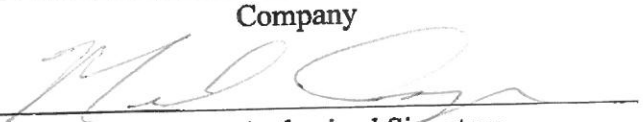
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[x]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company


Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[X] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[ ] Other

Description of Modification to Solicitation:

1. Responses to vendor question attached.
2. The bid opening remains on 01/06/2015 at :30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

CRFQ – DPS1500000008
ADDENDUM NO. 2

Questions:

Q1: Is there a color request for the vests?

A1: See Section 3.1.1.1 under the General Design subsection states the following:

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre- approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

Q2: Should the medical bag be full of supplies or empty?

A2: See Section 3.1.1.1 under the Options subsection states the following:

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

Q3: Should the medical bag be permanently affixed or attached using MOLLE or hook and loop?

A3: The retrofit pouch may be attached by velcro.

Other Information:

1. The bid opening remains on 01/06/2015 at 1:30 pm.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[ ]	Addendum No. 1	[ ]	Addendum No. 6
[X]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company

Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.

   ☑ A pre-bid meeting will not be held prior to bid opening.

   ☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

   ☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

   All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

   An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding. Submitted e-mails should have solicitation number in the subject line.

   Question Submission Deadline: 12/17/2014 by 4:00 pm

   Submit Questions to: Tara Lyle
   2019 Washington Street, East
   Charleston, WV 25305
   Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
   Email: Tara.L.Lyle@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. **BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile. The bid delivery address is:

   Department of Administration, Purchasing Division
   2019 Washington Street East
   Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER:
SOLICITATION NO.:
BID OPENING DATE:
BID OPENING TIME:
FAX NUMBER:

In the event that Vendor is responding to a request for proposal, and choses to respond in a manner other than by electronic submission through wvOASIS, the Vendor shall submit one original technical and one original cost proposal plus convenience copies of each to the Purchasing Division at the address shown above. Additionally, if Vendor does not submit its bid through wvOASIS, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

☐ Technical

☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: 01/06/2015 at 1:30 pm
Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. **ALTERNATES:** Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. **REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the $125 fee, if applicable.

14. **UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. **PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the

same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. **WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

   2.1. **"Agency"** or **"Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

   2.2. **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

   2.3. **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.

   2.4. **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.

   2.5. **"Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

   2.6. **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

   2.7. **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

   2.8. **"Vendor"** or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☑ **Term Contract**

Initial Contract Term: This Contract becomes effective on award and extends for a period of one (1) year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed 36 months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional _____ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☑ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under $100,000. Personal or business checks are not acceptable.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

☐ **Commercial General Liability Insurance:** In the amount of _____ or more.

☐ **Builders Risk Insurance:** In an amount equal to 100% of the amount of the Contract.

☐

☐

☐

☐

☐

The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

☑ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☐

☐

☐

☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. **LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or $5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

11. **LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount of _____ for _____.
This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

12. **ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Award Document, upon receipt.

13. **FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

14. **PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. **TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

16. **CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.

17. **TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

18. **APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

19. **COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable law.

20. **PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx. Vendor shall be responsible for ensuring compliance with

prevailing wage requirements and determining when prevailing wage requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

21. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

22. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.

23. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

24. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

25. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

26. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

27. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

28. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

29. **CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/default.html.

30. **DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code §§ 29B-1-1 et seq. and the competitive bidding laws found West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. A legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Additionally, pricing or cost information will not be considered exempt from disclosure and requests to withhold publication of pricing or cost information WILL NOT BE HONORED.

Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

31. **LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

32. **ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

33. **VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

34. **PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

35. **VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but

not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing. Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. **INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to an y person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. **PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of $1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.

38. **ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. **CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. **REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. **BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. **PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.

b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater.

For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars ($50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

CERTIFICATIONAND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Modern Firearms of Chattanooga, LLC
(Company)

Mike Amory/Operations Manager
(Authorized Signature) (Representative Name, Title)

304-925-0305 / 304-925-3648 / 01/05/2015
(Phone Number) (Fax Number) (Date)

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia State Police, West Virginia Natural Resources Police and the Division of Protective Services (Capitol Police to establish an open-end contract for Level II and Level IIIA Body Armor.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

   2.1 **"Contract Item"** or **"Contract Items"** means the list of items identified in Section 3, Subsection 1 below.

   2.2 **"Pricing Pages"** means the schedule of prices, estimated order quantity, and totals attached hereto as Exhibit A and used to evaluate the RFQ.

   2.3 **"RFQ"** means the official request for quotation published by the Purchasing Division and identified as CRFQ – DPS1500000008.

3. **GENERAL REQUIREMENTS:**

   3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

   3.1.1 Contract Item No. 1 - Level II Body Armor

   3.1.1.1 Level II Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

   Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level II. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should should include a male and female sample, full

product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level II Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

1. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification
6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level II
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level II, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper

positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema, or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
II	.79 lbs. sq. ft.	.19 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be performed in accordance with MIL-STD-662F using NIJ Standard-0101-

06 for Bullet Resistant Body Armor 9mm 124 grain FMJ RN and .357 Magnum 158 grain JSP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.

Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
II	9MM 124 Grain FMJ RN	1305 ft/s +/- 30 ft/s
II	.357 Magnum 158 Grain JSP	1430 ft/s +/- 30 ft/s

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
II	9MM 124 Grain FMJ RN	1305 ft/s +/- 30 ft/s
	.357 Magnum 158 Grain JSP	1430 ft/s +/- 30 ft/s

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of **NIJ Standard**-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
II	9MM 124 Grain FMJ RN	44mm
II	.357 Magnum 158 Grain JSP	44mm

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (I) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7X9 and 5X8 pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V-50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally, the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay-up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one inch (1").

2. The bottom edge of the front ballistic panel shall be within one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

3.1.2 Contract Item No. 2 - Level IIIA Body Armor

3.1.2.1 Level IIIA Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level IIIA. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should include a male and female sample, full product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level IIIA Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

I. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification

6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level IIIA
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level IIIA, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
IIIA	**1.05 lbs. sq. ft.**	**.25 inches**

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be

performed in accordance with MIL-STD-662F using NIJ Standard-0101-06 for Bullet Resistant Body Armor .357 Sig 125 grain FMJ FN and .44 Magnum 240 grain SJHP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the new NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V 50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.
Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**1470 ft/s +/- 30 ft/s**
IIIA	**.44 Magnum 240 Grain SJHP**	**1430 ft/s +/- 30 ft/s**

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**1470 ft/s +/- 30 ft/s**
IIIA	**.44 Magnum 240 Grain SJHP**	**1430 ft/s +/- 30 ft/s**

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of NIJ Standard-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**44mm**
IIIA	**.44 Magnum 240 Grain SJHP**	**44mm**

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers or Velcro integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (1) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or pre-approved equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7"x9" and 5"x8" pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one (1) inch on each side.

2. The bottom edge of the front ballistic panel shall be with one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne or equal fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

National Institute of Justice (NIJ) 0101-06 are attached to this document.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 **Pricing Pages:** Vendor should complete the Pricing Pages by [completing unit price, extended price and total as well as all vendor information]. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor should type or electronically enter the information into the Pricing Pages to prevent errors in the evaluation.

5. ORDERING AND PAYMENT:

5.1 **Ordering:** Vendor shall accept orders by regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Any on-line ordering system must have the capability to restrict prices and available items to conform to the Catalog originally submitted with this RFQ. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

5.2 **Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1 **Delivery Time:** Vendor shall deliver standard orders within 60 working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

6.2 **Late Delivery:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3 **Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all

emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

6.4 **Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5 **Return Due to Agency Error**: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7. MISCELLANEOUS:

7.1 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.

7.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

7.3 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

7.4 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Mike Amory
Telephone Number: 304-925-0305
Fax Number: 304-925-3648
Email Address: m2@modernguns.net

Rev. 04/14

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. **Application is made for 2.5% vendor preference for the reason checked:**

___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. **Application is made for 5% vendor preference for the reason checked:**

___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

✓ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

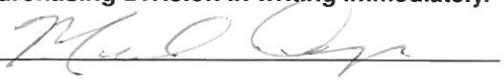
7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**

✓ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Mike Amory **Signed:** 

Date: 01/05/2015 **Title:** Operations Manager

Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Request for Quotation
31 — Public Safety

Proc Folder: 50832

Doc Description: Addendum No. 2 - Responses to vendor questions

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2014-12-18	2015-01-06 13:30:00	CRFQ 0612 DPS1500000008	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number: Modern Firearms 6601 MacCorkle Ave SE Charleston, WV 25304 ~ WV VENDOR#
Mike Amory Phone: 304-925-0305 Cell: 304-932-9232 Fax: 304-925-3648
FFL: 4-55-039-01-6M-02775 / 100% Woman Owned Small Business (031014-02)
CAGE CODE: 726Q6 / DUNS: 005649370 / EIN: 30-0441280 / E-VERIFY NUMBER 761984

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
(304) 558-2544
tara.l.lyle@wv.gov

Signature X _____ **FEIN #** 30-0441280 **DATE** 01/05/2015

All offers subject to all terms and conditions contained in this solicitation

FORM ID : WV-PRC-CRFQ-00

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Bullet proof vests	100.00000	EA		SEE ATTACHED SPECIFICATIONS

Comm Code	Manufacturer	Specification	Model #
46181502		SEE ATTACHED SPECIFICATIONS	

Extended Description :

Addendum No. 2 - Responses to vendor questions attached. See attached pages. The bid opening remains on 01/06/2015 at 1:30 pm.

The WV Purchasing Division for the agency, WV State Police, is soliciting bids for an open-end contract to provide body armor for the WV State Police, the WV Division of Natural Resources Police and the WV Division of Protective Services (Capitol Police), per the attached specifications.

Level II Body Armor-See attached specifications

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Bullet proof vests	100.00000	EA		SEE ATTACHED SPECIFICATIONS

Comm Code	Manufacturer	Specification	Model #
46181502		SEE ATTACHED SPECIFICATIONS	

Extended Description :

Level IIIA Body Armor-See attached specifications

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Bullet proof vests	100.00000	EA	SEE ATTACHED SPECIFICATIONS	

Comm Code	Manufacturer	Specification	Model #
46181502		SEE ATTACHED SPECIFICATIONS	

Extended Description :
Tactical Outer Carrier

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Bullet proof vests	100.00000	EA	SEE ATTACHED SPECIFICATIONS	

Comm Code	Manufacturer	Specification	Model #
46181502		SEE ATTACHED SPECIFICATIONS	

Extended Description :
Concealable Carriers

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Bullet proof vests	100.00000	EA	SEE ATTACHED SPECIFICATIONS	

Comm Code	Manufacturer	Specification	Model #
46181502		SEE ATTACHED SPECIFICATIONS	

Extended Description :
Gunshot Medical Kit affixed to the Body Armor

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

SEE ATTACHED SPECIFICATIONS FROM MODERN FIREARMS PRICING QUOTE

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[ ] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[X] Other

Description of Modification to Solicitation:

1. The body armor must meet or exceed the 2014 FBI body armor (ballistics) protocol. If should provide documentation that armor meets or exceeds the 2014 FBI protocol prior to contract award.

2. The bid opening remains on 01/06/2015 at 1:30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

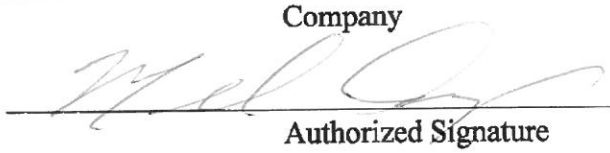
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[x]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company


Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[X] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[ ] Other

Description of Modification to Solicitation:

1. Responses to vendor question attached.
2. The bid opening remains on 01/06/2015 at :30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

CRFQ – DPS1500000008
ADDENDUM NO. 2

Questions:

Q1: Is there a color request for the vests?

A1: See Section 3.1.1.1 under the General Design subsection states the following:

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre- approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

Q2: Should the medical bag be full of supplies or empty?

A2: See Section 3.1.1.1 under the Options subsection states the following:

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

Q3: Should the medical bag be permanently affixed or attached using MOLLE or hook and loop?

A3: The retrofit pouch may be attached by velcro.

Other Information:

1. The bid opening remains on 01/06/2015 at 1:30 pm.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

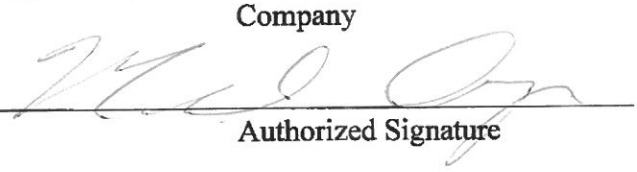
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[ ]	Addendum No. 1	[ ]	Addendum No. 6
[X]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company


Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.

   ☑ A pre-bid meeting will not be held prior to bid opening.

   ☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

   ☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

   All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

   An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding. Submitted e-mails should have solicitation number in the subject line.

   Question Submission Deadline: 12/17/2014 by 4:00 pm

   Submit Questions to: Tara Lyle
   2019 Washington Street, East
   Charleston, WV 25305
   Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
   Email: Tara.L.Lyle@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. **BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile. The bid delivery address is:

   Department of Administration, Purchasing Division
   2019 Washington Street East
   Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER:
SOLICITATION NO.:
BID OPENING DATE:
BID OPENING TIME:
FAX NUMBER:

In the event that Vendor is responding to a request for proposal, and choses to respond in a manner other than by electronic submission through wvOASIS, the Vendor shall submit one original technical and one original cost proposal plus convenience copies of each to the Purchasing Division at the address shown above. Additionally, if Vendor does not submit its bid through wvOASIS, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

☐ Technical

☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: 01/06/2015 at 1:30 pm
Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. **ALTERNATES:** Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. **REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the $125 fee, if applicable.

14. **UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. **PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the

same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. **WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

   2.1. **"Agency"** or **"Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

   2.2. **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

   2.3. **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.

   2.4. **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.

   2.5. **"Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

   2.6. **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

   2.7. **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

   2.8. **"Vendor"** or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☑ **Term Contract**

Initial Contract Term: This Contract becomes effective on award and extends for a period of one (1) year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed 36 months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional _____ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

   ☑ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

   ☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

   ☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

   ☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under $100,000. Personal or business checks are not acceptable.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

☐ **Commercial General Liability Insurance:** In the amount of _____ _____ or more.

☐ **Builders Risk Insurance:** In an amount equal to 100% of the amount of the Contract.

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The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

☑ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. **LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or $5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

11. **LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount of _____ for _____.
This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

12. **ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Award Document, upon receipt.

13. **FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

14. **PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. **TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

16. **CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.

17. **TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

18. **APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

19. **COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable law.

20. **PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx. Vendor shall be responsible for ensuring compliance with

prevailing wage requirements and determining when prevailing wage requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

21. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

22. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.

23. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

24. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

25. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

26. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

27. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

28. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

29. **CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/default.html.

30. **DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code §§ 29B-1-1 et seq. and the competitive bidding laws found West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq.

    If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. A legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Additionally, pricing or cost information will not be considered exempt from disclosure and requests to withhold publication of pricing or cost information WILL NOT BE HONORED.

    Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

31. **LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

32. **ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

33. **VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

34. **PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

    ☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

35. **VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but

not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing. Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. **INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to an y person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. **PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of $1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.

38. **ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. **CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. **REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

    ☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. **BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. **PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.

b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater.

For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars ($50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

CERTIFICATIONAND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Modern Firearms of Chattanooga, LLC
(Company)

Mike Amory/Operations Manager
(Authorized Signature) (Representative Name, Title)

304-925-0305 / 304-925-3648 / 01/05/2015
(Phone Number) (Fax Number) (Date)

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia State Police, West Virginia Natural Resources Police and the Division of Protective Services (Capitol Police to establish an open-end contract for Level II and Level IIIA Body Armor.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

   2.1 **"Contract Item"** or **"Contract Items"** means the list of items identified in Section 3, Subsection 1 below.

   2.2 **"Pricing Pages"** means the schedule of prices, estimated order quantity, and totals attached hereto as Exhibit A and used to evaluate the RFQ.

   2.3 **"RFQ"** means the official request for quotation published by the Purchasing Division and identified as CRFQ – DPS1500000008.

3. **GENERAL REQUIREMENTS:**

   3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

   3.1.1 Contract Item No. 1 - Level II Body Armor

   3.1.1.1 Level II Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

   Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level II. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should should include a male and female sample, full

product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level II Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

1. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification
6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level II
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level II, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper

positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema, or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
II	.79 lbs. sq. ft.	.19 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be performed in accordance with MIL-STD-662F using NIJ Standard-0101-

06 for Bullet Resistant Body Armor 9mm 124 grain FMJ RN and .357 Magnum 158 grain JSP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.

Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
II	**9MM 124 Grain FMJ RN**	**1305 ft/s +/- 30 ft/s**
II	**.357 Magnum 158 Grain JSP**	**1430 ft/s +/- 30 ft/s**

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
II	**9MM 124 Grain FMJ RN**	**1305 ft/s +/- 30 ft/s**
	.357 Magnum 158 Grain JSP	**1430 ft/s +/- 30 ft/s**

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of **NIJ Standard**-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
II	9MM 124 Grain FMJ RN	44mm
II	.357 Magnum 158 Grain JSP	44mm

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (I) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7X9 and 5X8 pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V-50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally, the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay-up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one inch (1").

2. The bottom edge of the front ballistic panel shall be within one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

3.1.2 Contract Item No. 2 - Level IIIA Body Armor

3.1.2.1 Level IIIA Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level IIIA. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should include a male and female sample, full product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level IIIA Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

I. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification

6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level IIIA
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level IIIA, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
IIIA	1.05 lbs. sq. ft.	.25 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be

performed in accordance with MIL-STD-662F using NIJ Standard-0101-06 for Bullet Resistant Body Armor .357 Sig 125 grain FMJ FN and .44 Magnum 240 grain SJHP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the new NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V 50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.
Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
IIIA	.357 Sig 125 Grain FMJ FN	1470 ft/s +/- 30 ft/s
IIIA	.44 Magnum 240 Grain SJHP	1430 ft/s +/- 30 ft/s

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
IIIA	.357 Sig 125 Grain FMJ FN	1470 ft/s +/- 30 ft/s
IIIA	.44 Magnum 240 Grain SJHP	1430 ft/s +/- 30 ft/s

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of NIJ Standard-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**44mm**
IIIA	**.44 Magnum 240 Grain SJHP**	**44mm**

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers or Velcro integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (1) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or pre-approved equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7"x9" and 5"x8" pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one (1) inch on each side.

2. The bottom edge of the front ballistic panel shall be with one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne or equal fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

National Institute of Justice (NIJ) 0101-06 are attached to this document.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 **Pricing Pages:** Vendor should complete the Pricing Pages by [completing unit price, extended price and total as well as all vendor information]. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor should type or electronically enter the information into the Pricing Pages to prevent errors in the evaluation.

5. ORDERING AND PAYMENT:

5.1 **Ordering:** Vendor shall accept orders by regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Any on-line ordering system must have the capability to restrict prices and available items to conform to the Catalog originally submitted with this RFQ. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

5.2 **Payment:** Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1 **Delivery Time:** Vendor shall deliver standard orders within 60 working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

6.2 **Late Delivery:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3 **Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all

emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

6.4 **Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5 **Return Due to Agency Error**: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7. MISCELLANEOUS:

7.1 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.

7.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

7.3 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

7.4 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Mike Amory
Telephone Number: 304-925-0305
Fax Number: 304-925-3648
Email Address: m2@modernguns.net

Rev. 04/14

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. **Application is made for 2.5% vendor preference for the reason checked:**

___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. **Application is made for 5% vendor preference for the reason checked:**

___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

✓ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules.***

✓ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Mike Amory **Signed:** _____

Date: 01/05/2015 **Title:** Operations Manager

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

September 13, 2012

Larry McCraney
President
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-II
NIJ Compliance Status Expires: September 13, 2017

Dear Mr. McCraney:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

All compliance requirements, as identified by the *NIJ Body Armor Compliance Testing Program Administrative Manual* and the *Ballistic Body Armor Applicant Package*, must be maintained as long as the NIJ Statement of Compliance is displayed on this armor model's labels. If, at any time, the compliance status of this armor model is changed, the NIJ Statement of Compliance shall cease to be used as of the date of the status change.

Sincerely,

Michael K O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 10/26/2014 — 1/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Lockton Companies, LLC-1 Kansas City 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000
CONTACT NAME:	
PHONE (A/C, No, Ext):	FAX (A/C, No):
E-MAIL ADDRESS:	

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : American Guarantee and Liab. Ins. Co.	26247
INSURER B : Zurich American Insurance NAIC 16535	
INSURER C : HDI-Gerling America Insurance Company	41343
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
1359574
JAGENBERG AG, KREFELD
SURVIVAL ARMOR INC
ATTN: BOBBIE SUE EPRIGHT
12621 CORPORATE LAKES DR UNIT 8
FORT MYERS FL 33913

COVERAGES — **CERTIFICATE NUMBER:** 12662075 — **REVISION NUMBER:** XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	GENERAL LIABILITY	N	N	GLD10691-06	1/1/2014	1/1/2015	EACH OCCURRENCE	$ 1,000,000
	[X] COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	[ ] CLAIMS-MADE [X] OCCUR						MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ Excluded
	[X] POLICY [ ] PRO-JECT [ ] LOC							$
A	AUTOMOBILE LIABILITY	N	N	BAP4882809-05	10/26/2013	10/26/2014	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[ ] ANY AUTO						BODILY INJURY (Per person)	$ XXXXXXX
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$ XXXXXXX
	[X] HIRED AUTOS [X] NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$ XXXXXXX
								$ XXXXXXX
	[ ] UMBRELLA LIAB [ ] OCCUR			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	[ ] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ XXXXXXX
	[ ] DED [ ] RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		N	WC4882810-05	10/26/2013	10/26/2014	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [N] (Mandatory in NH)	N/A					E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES /(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

12662075

THE DE NIJS GROUP
891 GOSFIELD GATE COURT
WESTERVILLE OH 43081

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE



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ACORD

CERTIFICATE OF LIABILITY INSURANCE 10/26/2014

DATE (MM/DD/YYYY) 1/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

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PRODUCER Lockton Companies, LLC-1 Kansas City 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED 1359574 JAGENBERG AG, KREFELD SURVIVAL ARMOR INC ATTN: BOBBIE SUE EPRIGHT 12621 CORPORATE LAKES DR UNIT 8 FORT MYERS FL 33913	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : American Guarantee and Liab. Ins. Co. — 26247 INSURER B : Zurich American Insurance NAIC 16535 INSURER C : HDI-Gerling America Insurance Company — 41343 INSURER D : INSURER E : INSURER F :

COVERAGES CERTIFICATE NUMBER: 12662075 REVISION NUMBER: XXXXXXX

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INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
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	X COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	CLAIMS-MADE X OCCUR						MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ Excluded
	X POLICY PRO-JECT LOC							$
A	AUTOMOBILE LIABILITY	N	N	BAP4882809-05	10/26/2013	10/26/2014	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$ XXXXXXX
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$ XXXXXXX
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$ XXXXXXX
								$ XXXXXXX
	UMBRELLA LIAB OCCUR			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ XXXXXXX
	DED RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		N	WC4882810-05	10/26/2013	10/26/2014	X WC STATU-TORY LIMITS OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N / N/A (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES /(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

12662075

THE DE NIJS GROUP
891 GOSFIELD GATE COURT
WESTERVILLE OH 43081

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Ronald J. Foster

ACORD 25 (2010/05)

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Intertek

Certificate of Registration

Founder
Thomas A. Edison
1896

This is to certify that the quality management system of

Survival Armor Inc.

Main Site: 12621 Corporate Lakes Drive, Unit 8, Fort Myers, Florida, 33913, USA

has been assessed and registered by Intertek as conforming to the requirements of

ISO 9001:2008

The quality management system is applicable to:

The design, development and manufacturing of body armor.

Intertek Testing Services NA, Inc. – Boxborough, MA, USA

Certificate Number: **QMS-0276b**

Certificate Issue Date: 20 March 2012
Certificate Expiry Date: 20 March 2015

In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed online at www.intertek.com/systems-certification.

PERRY JOHNSON REGISTRARS, INC.

Certificate of Registration

Perry Johnson Registrars, Inc., has audited the Quality Management System of:

Survival Armor

12621 Corporate Lakes Drive, Unit 8, Fort Myers, FL 33913 United States

(Hereinafter called the Organization) and hereby declares that Organization is in conformance with:

ISO 9001:2008/BA 9000:2012

This Registration is in respect to the following scope:

Design, Development and Manufacture of Body Armor

This Registration is granted subject to the system rules governing the Registration referred to above, and the Organization hereby covenants with the Assessment body duty to observe and comply with the said rules.

PERRY JOHNSON REGISTRARS, INC.

ANAB ACCREDITED

Terry Boboige

Terry Boboige, President

Perry Johnson Registrars, Inc. (PJR)
755 West Big Beaver Road, Suite 1340
Troy, Michigan 48084
(248) 358-3388

The validity of this certificate is dependent upon ongoing surveillance.

Effective Date:	Expiration Date:	Certificate No.:
October 15, 2014	October 14, 2017	C2014-02575

SURVIVAL ARMOR

Limited Warranty

Your vest is made up of two elements: (1) the protective panels, containing the ballistic and/or stab-resistant panels in a permanent protective cover and (2) a removable outer carrier. This vest is warranted to be free of defects in material and workmanship for the applicable warranty period, subject to the limitations listed below.

The warranty period for the carrier is 18 months from the date of purchase. The warranty period for the protective panels is 5 years from the date of purchase.

Carrier warranty excludes open seams or broken stitches that occur after delivery. Our warranties extend to the original user or purchaser only. This warranty is voided if the maintenance or care as stated on the protective panels label and enclosed instructions have not been followed or if the product has been altered in any manner by anyone other than Survival Armor. Since a coordinated protective panel and carrier are essential for proper protection, use of a carrier outer shell not produced or approved by Survival armor nullifies the warranty. To qualify for warranty coverage, you must (a) complete and mail the attached warranty card within 30 days of receipt of your vest, (b) if a warranty issue then return the entire vest to the Survival Armor in Ft. Myers at: 13881 Plantation Road, International Unit #8, Fort Myers, FL 33912 Attn: Returns, within the applicable warranty period, and (c) include the vest with carriers with the reasons for returning in writing.

If a warranty claim is made and Survival Armor determines that it is a valid warranty claim, then in its discretion Survival Armor will repair or replace the defective component. This limited warranty does not cover any claim or warranty made by a reseller or anyone else beyond the provisions of the warranty. This warranty is in lieu of all other warranties, express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose, which are expressly disclaimed.

The buyer agrees that its sole and exclusive remedy against Survival Armor will be limited to the repair or replacement of defective parts, provided that the buyer complies with all instructions and directions regarding the vest or its components. No partial or full refund to the purchase price will be provided. This exclusive remedy will not be deemed to have failed of its essential purpose so long as Survival Armor is willing to repair or replace a defective part in any manner that allows the product to be worn and meet the performance criteria for the balance of the warranty period. Survival Armor will not be liable to buyer and disclaims any liability for any incidental, consequential or special damages to the maximum extent permitted by any applicable state law warnings.

Each protective panel label lists the applicable standard to which it was certified. The protective panels were designed to stop the specific threats used in the protocol for this certification. The protective panel only offers protection on the areas it covers, and cannot cover areas it does not cover. The outer carrier offers no ballistic protection. Protective panels only protect when properly inserted into the carrier with the strike face out and the body side against the body. Always insert the protective panels as described in the materials enclosed with your body armor. Proper care of the protective panels and carrier is essential to maintaining the comfort and performance of the vest. Always follow the instructions for care and maintenance that came with the vest.

Survival Armor disclaims liability for consequential damages for breach of any express or implied warranty, including any implied warranty or merchantability and fitness for particular purpose. The laws of your state may impose different requirements.

A member of the VERSEIDAG PROTECTION GROUP

13881 Plantation Road - International Center I, Unit 8 - Fort Myers, FL 33912
Phone: 866.868.5001 Fax: 239.210.0898 Web: www.survivalarmor.com

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems-Wichita Division
Report Identification Number: 14N015
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002340
Manufacturer: Survival Armor

Report Date: 08/29/14
NIJ Armor Type: 3A

Threat 1 - New Armor
Ammunition: .357 SIG 125/FMJ
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1				Size: C-5				Sample 2				Size: C-5			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1476	0	27.42		1480	0	25.55		1474	0	25.71		1483	0	25.28	
2	1464	0	26.38		1457	0	27.31		1498	0	27.48		1472	0	26.48	
3	1469	0	30.03		1469	0	28.67		1495	0	28.17		1509	0	25.93	
4	1480	0		g	1488	0			1492	0		g	1479	0		
5	1455	0		g	1475	0			1470	0		g	1473	0		
6	1474	0			1471	0			1487	0			1504	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 27.03 mm
Maximum BFS: 30 mm St. Dev: 1.42549 mm
Pass - No BFS greater than 44 mm

	Sample 3				Size: C-1				Sample 4				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1452	0	25.34		1476	0	27.24		1477	0	26.95		1472	0	26.64	
2	1491	0	28.59		1500	0	27.88		1480	0	26.94		1472	0	26.46	
3	1466	0	26.73		1493	0	28.96		1475	0	28.14		1469	0	26.81	
4	1478	0		g	1478	0			1480	0		g	1473	0		
5	1446	0			1478	0			1479	0			1486	0		
6	1446	0			1480	0			1490	0			1490	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 27.22 mm
Maximum BFS: 29 mm St. Dev: 1.00881 mm
Pass - No BFS greater than 44 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5				Size: C-5				Sample 6				Size: C-5			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1431	0	35.79		1416	0	35.46		1428	0	36.31		1413	0	36.53	
2	1441	0	32.46		1416	0	34.1		1419	0	35.66		1404	0	34.2	
3	1414	0	36.28		1409	0	34.41		1405	0	35.7		1425	0	35.74	
4	1410	0			1406	0			1422	0			1413	0		
5	1406	0			1410	0			1412	0			1436	0		
6	1418	0			1421	0			1431	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 35.22 mm
Maximum BFS: 36.5 mm St. Dev: 1.19367 mm
Pass - No BFS greater than 44 mm

	Sample 7				Size: C-1				Sample 8				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1426	0	35.82		1409	0	36.47		1431	0	37.75		1421	0	36.49	
2	1431	0	36.3		1407	0	35.22		1405	0	34.53		1428	0	35.12	
3	1404	0	38.07		1426	0	37.42		1422	0	36.41		1431	0	36.43	
4	1406	0		g	1406	0			1443	0			1410	0		
5	1411	0			1413	0			1408	0			1429	0		
6	1403	0			1414	0			1411	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 36.34 mm
Maximum BFS: 38.1 mm St. Dev: 1.0656 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

	Sample 21				Size: C-5				Sample 22				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1424	0	26.84		1414	0	26.49		1393	0	29.48					<<Error
2	1407	0	31.69		1397	0	25.29		1409	0	27.55					<<Error
3	1409	0	27.6		1421	0	28.16		1439	0	27.79					<<Error
4	1398	0		g	1412	0			1414	0		g				<<Error
5	1393	0		g	1415	0			1416	0						<<Error
6	1396	0			1433	0			1392	0						<<Error
7																
8																
Summary:	Perforations: 0 (Pass)								Perforations: 0 (Pass)							
	Maximum BFS: 31.69 mm (no requirement)								Maximum BFS: 29.48 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

	Sample 23				Size: C-5				Sample 24				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1336	0	31.18		1336	0	32.8		1360	0	32.69		1358	0	34.25	
2	1344	0	33.16		1357	0	35.8		1344	0	33.85		1363	0	33.83	
3	1325	0	30.1		1365	0	31.51		1338	0	33.39		1347	0	35	
4	1352	0		g	1362	0			1337	0			1341	0		
5	1340	0		g	1344	0			1354	0			1336	0		
6	1335	0			1351	0			1352	0			1341	0		
7																
8																
Summary:	Perforations: 0 (Pass)								Perforations: 0 (Pass)							
	Maximum BFS: 35.8 mm (no requirement)								Maximum BFS: 35 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned

0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only

Maximum BFS: 38.1 mm

This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 12.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1469	0		1458	0		1460	0		1450	0		1458	0	
2	1580	0		1569	0		1559	0		1597	0		1605	0	
3	1695	0		1710	0		1678	0		1668	0		1677	0	
4	1746	0		1749	1		1764	1		1764	0		1744	0	
5	1835	1		1696	0		1688	0		1834	0		1844	1	
6	1760	0		1747	0		1740	0		1908	1		1793	0	
7	1807	0		1782	0		1775	1		1857	0		1814	0	
8	1840	1		1843	1		1738	0		1910	0		1853	1	
9	1805	1		1805	0		1790	0		1952	0		1834	1	
10	1773	0		1837	1		1811	0		1987	0		1777	1	
11	1817	0		1765	0		1882	0		1975	1		1748	0	
12	1865	0		1796	0		1914	0		1960	1		1762	0	
13															
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1478	0		1454	0		1453	0		1468	0		1475	0	
2	1589	0		1592	0		1574	0		1552	0		1575	0	
3	1672	0		1685	0		1682	0		1686	0		1696	0	
4	1760	1		1774	1		1740	1		1757	0		1772	0	
5	1703	0		1697	0		1676	0		1859	1		1828	0	
6	1731	0		1740	0		1720	0		1792	0		1911	0	
7	1779	0		1756	0		1769	0		1804	0		1994	0	
8	1789	1		1802	0		1803	1		1848	1		2038	1	
9	1761	0		1848	0		1764	0		1830	0		1988	0	
10	1813	0		1886	1		1850	0		1860	1		2035	1	
11	1859	0		1841	1		1856	0		1818	1		1989	1	
12	1902	1		1814	0		1886	0		1781	0		1954	1	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	31	Acceptable
Stops (Partial Penetrations):	89	Acceptable

Perforations below 1500 ft/s: 0 Acceptable

Regression Analysis

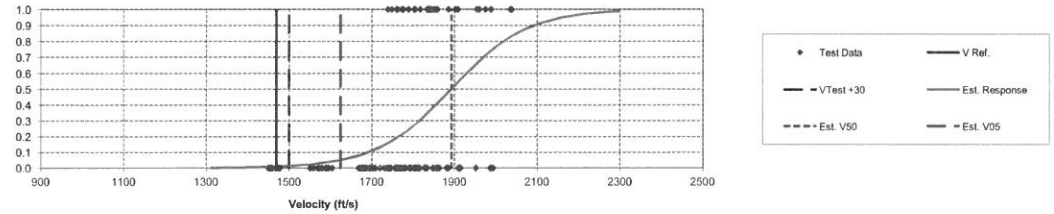
Regression Model: **Logistic**

Estimated V50: 1893 ft/s

Estimated V05: 495.2 m/s (1625) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.96%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1410	0		1426	0		1423	0		1427	0		1420	0	
2	1516	0		1513	0		1528	0		1510	0		1521	0	
3	1621	0		1606	0		1621	0		1629	0		1628	0	
4	1707	0		1721	1		1715	1		1723	1		1710	1	
5	1788	1		1653	0		1657	0		1809	1		1650	0	
6	1750	1		1685	0		1672	0		1739	0		1687	0	
7	1668	1		1730	1		1736	1		1776	0		1725	1	
8	1615	0		1682	0		1701	1		1817	1		1695	1	
9	1642	0		1724	0		1656	1		1778	0		1650	0	
10	1675	0		1747	1		1638	0		1831	0		1682	1	
11	1702	0		1718	0		1656	0		1845	0		1656	0	
12	1756	1		1760	0		1692	0		1884	1		1688	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1414	0		1435	0		1423	0		1416	0		1418	0	
2	1518	0		1527	0		1553	0		1509	0		1516	0	
3	1624	0		1606	0		1627	0		1619	0		1615	0	
4	1720	1		1709	1		1716	0		1709	0		1733	1	
5	1658	0		1672	0		1799	0		1803	1		1660	0	
6	1689	0		1689	0		1877	1		1750	1		1700	0	
7	1730	0		1729	1		1831	1		1688	1		1725	1	
8	1775	0		1697	1		1778	1		1612	0		1686	1	
9	1785	1		1646	1		1720	0		1626	0		1663	0	
10	1764	0		1623	0		1741	0		1709	0		1690	0	
11	1797	0		1657	0		1791	0		1733	0		1732	0	
12	1827	1		1692	0		1821	0		1770	0		1773	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	35	Acceptable
Stops (Partial Penetrations):	85	Acceptable

Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis

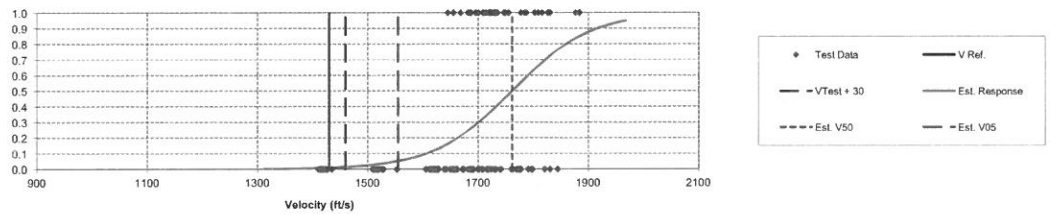
Regression Model: **Logistic**

Estimated V50: 1762 ft/s

Estimated V05: 473,9 m/s (1555) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **0.89%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1388	0		1390	0	
2	1492	0		1479	0	
3	1595	0		1628	0	
4	1711	0		1705	0	
5	1805	1		1813	0	
6	1773	0		1940	1	
7	1810	0		1842	1	
8	1837	0		1781	0	
9	1899	1		1813	0	
10	1818	1		1863	0	
11	1803	1		1907	1	
12	1760	0		1853	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	7	
Stops (PP):	17	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1843 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1358	0		1349	0	
2	1449	0		1438	0	
3	1501	0		1492	0	
4	1602	0		1602	0	
5	1708	0		1721	0	
6	1808	1		1802	0	
7	1780	0		1882	1	
8	1777	1		1821	1	
9	1777	1		1780	1	
10	1723	1		1715	0	
11	1623	0		1758	0	
12	1687	0		1780	1	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	8	
Stops (PP):	16	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1761 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: **0** This requirement is for all Ballistic Limit tested samples - New and Conditioned

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only

Threat 1: 0.96%
Threat 2: 0.89%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 12.0 / Operating System version Windows (32-bit) NT 5.01

Chesapeake TESTING

www.chesapeaketesting.com

30 October 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-124, Tested 22 and 23 October 2014, Purchase Order No. 0008796, Test Report No. CT-RD-14-1232

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 22 and 23 October 2014. This report includes a summary of the test as well as a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jem

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Chesapeake TESTING

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008796
Report No.: CT-RD-14-1232

Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P) and Ballistic Resistance Test: Job No. 2049-124, Tested 22 and 23 October 2014

Prepared by:

Craig A. Thomas
Jordan E. Mears

Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

27 October 2014

Further dissemination only as directed by Survival Armor, October 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

1 Introduction

Survival Armor provided 16 armor samples to Chesapeake Testing for ballistic testing on 22 and 23 October 2014. Prior to testing, the samples were sized and weighed. The results are shown in Table 1.

Table 1. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-124-1	1409295370-Front-Dry	Proprietary	2216-2216	2.53
2049-124-2	1409295370-Back-Dry	Proprietary	2216-2216	2.40
2049-124-3	1409295362-Front-Dry	Proprietary	2216-2216	2.54
2049-124-4	1409295362-Back-Dry	Proprietary	2216-2216	2.42
2049-124-5	1409295371-Front-Hot	Proprietary	2216-2216	2.54
2049-124-6	1409295371-Back-Hot	Proprietary	2216-2216	2.42
2049-124-7	140925365-Front-Tumbled-Hot	Proprietary	2216-2216	2.53
2049-124-8	140925365-Back-Tumbled-Hot	Proprietary	2216-2216	2.42
2049-124-9	1409295368-Front-Cold	Proprietary	2216-2216	2.51
2049-124-10	1409295368-Back-Cold	Proprietary	2216-2216	2.42
2049-124-11	1409295364-Front-Tumbled-Cold	Proprietary	2216-2216	2.59
2049-124-12	1409295364-Back-Tumbled-Cold	Proprietary	2216-2216	2.43
2049-124-13	1409295369-Front-Wet	Proprietary	2216-2216	2.49
2049-124-14	1409295369-Back-Wet	Proprietary	2216-2216	2.41
2049-124-15	1409295363-Front-Tumbled-Wet	Proprietary	2216-2216	2.54
2049-124-16	1409295363-Back-Tumbled-Wet	Proprietary	2216-2216	2.43

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- 9-mm NATO, 124-grain full metal jacketed (FMJ) projectiles.
- 9mm, 127-grain +P+ T-Series projectiles.
- 9-mm, 147-grain gold dot hollow point (GDHP) projectiles.
- .40-cal., 180-grain S&W Speer GDHP projectiles.
- .45 Auto, 230-grain brass jacketed hollow point (BJHP) projectiles.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Some projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount while others were fired from a pistol.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A).

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with FBI Test Protocol Version 4.1, dated 22 May 2014 and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with FBI Test Protocol Version 4.1. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (66 ±2 °F).

The samples were conditioned prior to testing as denoted in the Sample No. and on the data sheets. For each shot, the target was strapped to a gelatin block that was attached to a rigid test fixture. All firings were conducted at 17.200 ft from the target unless otherwise noted. The projectile velocities used for the test were in accordance with the referenced performance standard.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round data sheets for all ballistic resistance testing performed are presented on the following pages.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-1	1409295370-Front-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1422	None
				3	1432	None
				4	1430	None
				5	1425	None
				6	1427	None
				7	1440	None
				8	1431	None
2049-124-2	1409295370-Back-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1436	None
				2	1442	None
				3	1453	None
				4	1446	None
				5	1410	None
				6	1408	None
				7	1410	None
				8	1418	None

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-3	1409295362-Front-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1412	None
				3	1422	None
				4	1410	None
				5	1433	None
				6	1428	None
				7	1426	None
				8	1436	None
2049-124-4	1409295362-Back-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1436	None
				2	1445	None
				3	1437	None
				4	1437	None
				5	1437	None
				6	1432	None
				7	1431	None
				8	1437	None

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-5	1409295371-Front-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1408	None
				2	1422	None
				3	1410	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None
2049-124-6	1409295371-Back-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1417	None
				2	1434	None
				3	1431	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-7	140925365-Front-Tumbled-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1442	None
				2	1430	None
				3	1435	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None
2049-124-8	140925365-Back-Tumbled-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1419	None
				2	1425	None
				3	1429	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-9	1409295368-Front-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1430	None
				3	1419	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-10	1409295368-Back-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1447	None
				2	1437	None
				3	1450	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-11	1409295364-Front-Tumbled-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1449	None
				2	1436	None
				3	1450	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-12	1409295364-Back-Tumbled-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1453	None
				2	1447	None
				3	1431	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-13	1409295369-Front-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1418	None
				2	1417	None
				3	1429	None
2049-124-14	1409295369-Back-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1450	None
				2	1431	None
				3	1445	None
2049-124-15	1409295363-Front-Tumbled-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1444	None
				2	1428	None
				3	1437	None
2049-124-16	1409295363-Back-Tumbled-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1447	None
				3	1449	None

[a] Contact shot; no velocity reading was obtained

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-1
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295370-Front-Dry

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.53 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	66.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	56.3%
Condition:	Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3511	1424	3043	1424	1424	None	(a)
2	1	3517	1422	3048	1422	1422	None	(a)
3	1	3492	1432	3026	1432	1432	None	(a)
4	1	3496	1430	3030	1430	1430	None	(b)
5	1	3508	1425	3040	1425	1425	None	(b)
6	1	3504	1427	3037	1427	1427	None	(b)
7	1	3473	1440	3009	1440	1440	None	(c)
8	1	3495	1431	3029	1431	1431	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-2
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295370-Back-Dry

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.40 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	67.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	56%
Condition:	Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3482	1436	3018	1436	1436	None	(a)
2	1	3468	1442	3006	1441	1442	None	(a)
3	1	3442	1453	2983	1453	1453	None	(a)
4	1	3458	1446	2997	1446	1446	None	(b)
5	1	3545	1410	3072	1410	1410	None	(b)
6	1	3550	1408	3077	1408	1408	None	(b)
7	1	3547	1410	3074	1410	1410	None	(c)
8	1	3525	1418	3055	1418	1418	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-3
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295362-Front-Dry

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.54 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	67.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	54.8%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 days)/Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3512	1424	3044	1423	1424	None	(a)
2	1	3542	1412	3069	1412	1412	None	(a)
3	1	3516	1422	3047	1422	1422	None	(a)
4	1	3546	1410	3073	1410	1410	None	(b)
5	1	3488	1433	3023	1433	1433	None	(b)
6	1	3503	1427	3035	1428	1428	None	(b)
7	1	3506	1426	3038	1426	1426	None	(c)
8	1	3482	1436	3018	1436	1436	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-4
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295362-Back-Dry

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.42 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	66.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	56.1%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 days)/Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3483	1436	3018	1436	1436	None	(a)
2	1	3459	1446	2998	1445	1445	None	(a)
3	1	3480	1437	3016	1437	1437	None	(a)
4	1	3480	1437	3016	1437	1437	None	(b)
5	1	3479	1437	3014	1438	1437	None	(b)
6	1	3492	1432	3026	1432	1432	None	(b)
7	1	3495	1431	3029	1431	1431	None	(c)
8	1	3479	1437	3015	1437	1437	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-5
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295371-Front-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.54 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.5 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.7%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3553	1407	3076	1409	1408	None	(a)
2	1	3517	1422	3045	1423	1422	None	(a)
3	1	3548	1409	3072	1410	1410	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-6
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295371-Back-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.42 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.7%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3531	1416	3057	1417	1417	None	(a)
2	1	3489	1433	3021	1434	1434	None	(a)
3	1	3496	1430	3027	1431	1431	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-7
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 140925365-Front-Tumbled-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.53 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.2 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Speer KK17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3468	1442	3003	1443	1442	None	(a)
2	1	3499	1429	3029	1431	1430	None	(a)
3	1	3485	1435	3017	1436	1435	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-8
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 140925365-Back-Tumbled-Hot

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.42 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.7 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 60.8%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /+140 for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3526	1418	3052	1420	1419	None	(a)
2	1	3511	1424	3040	1425	1425	None	(a)
3	1	3501	1428	3031	1430	1429	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-9
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295368-Front-Cold

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.51 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.4 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.7%
Condition:	-40 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3512	1424	3041	1425	1424	None	(a)
2	1	3499	1429	3029	1431	1430	None	(a)
3	1	3526	1418	3053	1419	1419	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-10
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295368-Back-Cold

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.42 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58.7%
Condition:	-40 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9mm, 127-grain +P+ T-Series	Federal Winchester Ranger 60HB52	Accurate No. 2 Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2993	1448	1447	None	(a)
2	1	3482	1436	3015	1437	1437	None	(a)
3	1	3450	1449	2986	1451	1450	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-11
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295364-Front-Tumbled-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.59 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.2 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 54.3%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /-40 F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9mm, 127-grain +P+ T-Series	Federal Winchester Ranger 60HB52	Accurate No. 2 Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3453	1448	2990	1449	1449	None	(a)
2	1	3483	1436	3016	1437	1436	None	(a)
3	1	3449	1450	2986	1451	1450	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-12
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295364-Back-Tumbled-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.43 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.0 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.3%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /-40 F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2981	1454	1453	None	(a)
2	1	3458	1446	2994	1447	1447	None	(a)
3	1	3496	1430	3027	1431	1431	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-13
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295369-Front-Wet

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.49 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.4 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.6%
Condition:	Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3527	1418	3053	1419	1418	None	(a)
2	1	3530	1416	3057	1417	1417	None	(a)
3	1	3501	1428	3031	1430	1429	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-14
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295369-Back-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.41 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.7 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.3%
Condition: Submerged in water for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3449	1450	2986	1451	1450	None	(a)
2	1	3495	1431	3026	1432	1431	None	(a)
3	1	3461	1445	2997	1446	1445	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-15
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295363-Front-Tumbled-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.54 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.9 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 61.1%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) Submerged in water for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3464	1443	2999	1445	1444	None	(a)
2	1	3502	1428	3032	1429	1428	None	(a)
3	1	3481	1436	3014	1438	1437	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-16
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295363-Back-Tumbled-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.43 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.2 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 55.3%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) Submerged in water for 14 to 24 hours.		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3513	1423	3041	1425	1424	None	(a)
2	1	3456	1447	2992	1448	1447	None	(a)
3	1	3453	1448	2990	1449	1449	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13079
Test Date: 06/12/13
Customer: Survival Armor

Test Conditions
Temperature: 74 °F.
Humidity: 58 %
Clay Block No.: 8
Clay Temp.: 98.3 °F.
Drop (Avg.): 20.62 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.34 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Front	1.49	Dry	0	1	1	9mm	50 / USM49mm	274.2	2089	27.70
LW-II	Front	1.49	Dry	0	2	2	9mm	50 / USM49mm	279.8	2047	27.70
LW-II	Front	1.49	Dry	0	3	3	9mm	50 / USM49mm	274.2	2089	29.36
LW-II	Front	1.49	Dry	45	4	4	9mm	50 / USM49mm	264.7	2164	No Perforation
LW-II	Front	1.49	Dry	30	5	5	9mm	50 / USM49mm	278.9	2054	No Perforation
LW-II	Front	1.49	Dry	0	6	6	9mm	50 / USM49mm	272.2	2104	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.0" - 2.75"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Liberty Ammunition Ultra Defense, 9mm+P 50 gr. USM49mm Ultra Fragmentation @ Factory Velocity

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: Paragon
Panel Side: Front
Serial No.: 223484
Lot No.: 6590
Size: 2014
Weight (lbs.): 1.49
DoM: 6/7/2013
Threat Level: II

Sample Description:
No sample description per customer request.

Crawford/Wilson

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13081
Test Date: 06/11/13
Customer: Survival Armor

Test Conditions

Temperature:	73	°F.
Humidity:	48	%
Clay Block No.:	8	
Clay Temp.:	98.5	°F.
Drop (Avg.):	20.83	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.34 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.33 ft.
Midpoint to Target:	8.20 ft.
Target to Witness:	0 ft.
Barrel Length:	4 in.
Clay Block:	5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Front	1.88	Dry	0	1	1	.45 Cal.	78 / USM45	299.7	1911	30.30
LW-II	Front	1.88	Dry	0	2	2	.45 Cal.	78 / USM45	289.6	1978	30.25
LW-II	Front	1.88	Dry	0	3	3	.45 Cal.	78 / USM45	289.7	1977	30.60
LW-II	Front	1.88	Dry	45	4	4	.45 Cal.	78 / USM45	289.5	1979	No Perforation
LW-II	Front	1.88	Dry	30	5	5	.45 Cal.	78 / USM45	288.7	1984	No Perforation
LW-II	Front	1.88	Dry	0	6	6	.45 Cal.	78 / USM45	290.8	1970	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 3.0" - 3.75"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Liberty Ammunition Ultra Defense, .45 Cal.+P 78 gr. USM45 Ultra Fragmentation @ Factory Velocity

Sample Tested:

Manufacturer:	Survival Armor
Model No.:	LW-II
Model Name:	Paragon
Panel Side:	Front
Serial No.:	223483
Lot No.:	6590
Size:	2216
Weight (lbs.):	1.88
DoM:	6/7/2013
Threat Level:	II

Sample Description:
No sample description per customer request.

Crawford/Nguyen

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13080
Test Date: 06/11/13
Customer: Survival Armor

Test Conditions
Temperature: 73 °F.
Humidity: 48 %
Clay Block No.: 6
Clay Temp.: 98.5 °F.
Drop (Avg.): 19.70 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.34 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Back	1.57	Dry	0	1	1	.40 S&W	60 / USM40	286.4	2000	27.35
LW-II	Back	1.57	Dry	0	2	2	.40 S&W	60 / USM40	287.5	1992	29.79
LW-II	Back	1.57	Dry	0	3	3	.40 S&W	60 / USM40	287.6	1992	28.84
LW-II	Back	1.57	Dry	45	4	4	.40 S&W	60 / USM40	290.1	1974	No Perforation
LW-II	Back	1.57	Dry	30	5	5	.40 S&W	60 / USM40	288.7	1984	No Perforation
LW-II	Back	1.57	Dry	0	6	6	.40 S&W	60 / USM40	300.3	1907	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.0" - 2.75"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Liberty Ammunition Ultra Defense, .40 S&W 60 gr. USM40 Ultra Fragmentation @ Factory Velocity

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: Paragon
Panel Side: Back
Serial No.: 223484
Lot No.: 6590
Size: 2014
Weight (lbs.): 1.57
DoM: 6/7/2013
Threat Level: II

Sample Description:
No sample description per customer request.

Crawford/Nguyen

United States Test Laboratory

Survival Armor Inc.
Mr. Ken Mueller
13881 Plantation Rd.
International Center 1 Unit 8
Fort Meyers, FL 33912

November 20, 2012

Dear Mr. Mueller,

Per your request United States Test Laboratory performed Ballistic Resistance Testing in accordance with Modified/Abbreviated NIJ 0101.06, Special Threat. The testing was performed on model LW –II. The projectiles used for testing are listed below.

The following table represents a summary of the test results. A copy of the ballistic test reports are attached for your inspection.

The test record numbers included in this series of testing are: **SA12024-029**

USTL Report Number	Threat	Highest Velocity (fps)	Lowest Velocity (fps)	Highest BFS (mm)	Lowest BFS (mm)	Perforations
SA12024	9mm 127gr SXT+P+	1318	1241	42.49	30.72	None
SA12025	.357 Sig 125gr TMJ	1383	1325	39.71	34.77	None
SA12026	FN SS-197 5.7x28 40gr V-Max	1736	1706	24.00	20.53	None
SA12027	FN SS-192 5.7x28 28gr JHP	2095	2066	21.77	18.55	None
SA12028	7.62mm 85gr FMJ Tokarev	1546	1515	35.79	31.23	None
SA12029	Speer .357 Sig 125gr GDHP	1370	1342	35.33	32.17	None

The data presented is for the samples tested only; it does not guarantee the performance of other samples of the same or similar product. The test results do not imply endorsement by United States Test Laboratory.

The test samples are being shipped to you via UPS Ground. Should you have any questions, please feel free to call upon us.

Best regards,

Richard Mouser
General Manager

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12024
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 99.6 °F.
Drop (Avg.): 18.3 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208573	2215/2215	1.75	Wet	0	1	1	9mm	127/SXT	438.7	1306	30.72
208573	2215/2215	1.75	Wet	0	2	2	9mm	127/SXT	461.6	1241	42.49
208573	2215/2215	1.75	Wet	0	3	3	9mm	127/SXT	434.7	1318	34.53
208573	2215/2215	1.75	Wet	30	4	4	9mm	127/SXT	454.5	1260	No Perforation
208573	2215/2215	1.75	Wet	45	5	5	9mm	127/SXT	456.6	1254	No Perforation
208573	2215/2215	1.75	Wet	0	6	6	9mm	127/SXT	459.4	1247	No Perforation
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This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
9mm 127gr SXT+P+.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208573
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12025
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 98.4 °F.
Drop (Avg.): 20.4 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208573	2215/2215	1.79	Wet	0	1	1	.357 Sig	125/TMJ	429.0	1335	35.08
208573	2215/2215	1.79	Wet	0	2	2	.357 Sig	125/TMJ	414.1	1383	39.71
208573	2215/2215	1.79	Wet	0	3	3	.357 Sig	125/TMJ	432.2	1325	34.77
208573	2215/2215	1.79	Wet	45	4	4	.357 Sig	125/TMJ	429.8	1333	No Perforation
208573	2215/2215	1.79	Wet	30	5	5	.357 Sig	125/TMJ	428.5	1337	No Perforation
208573	2215/2215	1.79	Wet	0	6	6	.357 Sig	125/TMJ	419.7	1365	No Perforation
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This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
.357Sig 125gr TMJ.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208573
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12026
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 97.3 °F.
Drop (Avg.): 20.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.38 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.8 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208572	2215/2215	1.73	Wet	0	1	1	5.7x28	40/V-Max	331.7	1727	20.53
208572	2215/2215	1.73	Wet	0	2	2	5.7x28	40/V-Max	329.9	1736	24.00
208572	2215/2215	1.73	Wet	0	3	3	5.7x28	40/V-Max	335.7	1706	23.10
208572	2215/2215	1.73	Wet	45	4	4	5.7x28	40/V-Max	334.0	1715	No Perforation
208572	2215/2215	1.73	Wet	30	5	5	5.7x28	40/V-Max	333.6	1717	No Perforation
208572	2215/2215	1.73	Wet	0	6	6	5.7x28	40/V-Max	332.2	1724	No Perforation
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This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
FN SS-197 5.7x28 40gr V-Max
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208572
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
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Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12027
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 96.5 °F.
Drop (Avg.): 18.3 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.38 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.8 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208572	2215/2215	1.77	Wet	0	1	1	5.7x28	28/JHP	273.4	2095	19.62
208572	2215/2215	1.77	Wet	0	2	2	5.7x28	28/JHP	274.3	2088	21.77
208572	2215/2215	1.77	Wet	0	3	3	5.7x28	28/JHP	277.2	2066	18.55
208572	2215/2215	1.77	Wet	30	4	4	5.7x28	28/JHP	275.2	2081	No Perforation
208572	2215/2215	1.77	Wet	45	5	5	5.7x28	28/JHP	274.6	2086	No Perforation
208572	2215/2215	1.77	Wet	0	6	6	5.7x28	28/JHP	274.5	2087	No Perforation
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This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
FN SS-192 5.7x28 28gr JHP
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208572
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12028
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions

Temperature:	75	°F.
Humidity:	46	%
Clay Block No.:	7	
Clay Temp.:	96.8	°F.
Drop (Avg.):	18.0	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.45 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.33 ft.
Midpoint to Target:	8.20 ft.
Target to Witness:	0 ft.
Barrel Length:	4.0 in.
Clay Block:	5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208574	2215/2215	1.74	Wet	0	1	1	7.62x25	85/FMJ	370.8	1545	31.23
208574	2215/2215	1.74	Wet	0	2	2	7.62x25	85/FMJ	375.7	1525	35.79
208574	2215/2215	1.74	Wet	0	3	3	7.62x25	85/FMJ	370.5	1546	35.69
208574	2215/2215	1.74	Wet	30	4	4	7.62x25	85/FMJ	371.7	1541	No Perforation
208574	2215/2215	1.74	Wet	45	5	5	7.62x25	85/FMJ	378.2	1515	No Perforation
208574	2215/2215	1.74	Wet	0	6	6	7.62x25	85/FMJ	373.3	1534	No Perforation
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This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.

Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
7.62mm 85gr FMJ Tokarev.
Customer requested factory velocities.

Sample Tested:

Manufacturer:	Survival Armor
Model No.:	LW-II
Model Name:	N/A
Sample Side:	Front
Sample No.:	208574
Lot No.:	5834
Size:	2215-2215
DoM:	11/12/2012
Threat Level:	II

Sample Description:
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Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12029
Test Date: 11/20/12
Customer: Survival Armor

Test Conditions

Temperature:	72	°F.
Humidity:	50	%
Clay Block No.:	7	
Clay Temp.:	95.6	°F.
Drop (Avg.):	19.2	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.45 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.33 ft.
Midpoint to Target:	8.20 ft.
Target to Witness:	0 ft.
Barrel Length:	4.0 in.
Clay Block:	5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-6	VELOCITY fps	Perforation BFS (mm)
208574	2215/2215	1.78	Wet	0	1	1	.357 Sig	125/GDHP	426.7	1342	32.17
208574	2215/2215	1.78	Wet	0	2	2	.357 Sig	125/GDHP	422.6	1355	35.25
208574	2215/2215	1.78	Wet	0	3	3	.357 Sig	125/GDHP	422.5	1356	35.33
208574	2215/2215	1.78	Wet	45	4	4	.357 Sig	125/GDHP	423.3	1353	No Perforation
208574	2215/2215	1.78	Wet	30	5	5	.357 Sig	125/GDHP	422.0	1357	No Perforation
208574	2215/2215	1.78	Wet	0	6	6	.357 Sig	125/GDHP	418.1	1370	No Perforation
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										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Speer .357 Sig 125gr. GDHP.
Customer requested factory velocities.

Sample Tested:

Manufacturer:	Survival Armor
Model No.:	LW-II
Model Name:	N/A
Sample Side:	Back
Sample No.:	208574
Lot No.:	5834
Size:	2215-2215
DoM:	11/12/2012
Threat Level:	II

Sample Description:

*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson

Survival Armor Inc.
Mr. Ken Mueller
12621 Corporate Lakes Dr. Unit 8
Fort Myers, FL 33913

January 4, 2013

Dear Mr. Mueller,

Per your request United States Test Laboratory performed Ballistic Resistance Testing in accordance with Modified/Abbreviated NIJ 0101.06, Special Threat. The testing was performed on model **LW-II**. The projectiles used were Fiocchi 9mm Luger 115gr FMJ, Wolf 9mm Luger 115gr FMJ and Winchester .40 S&W 180gr SXT.

The following table represents a summary of the test results. A copy of the ballistic test reports are attached for your inspection.

The test record numbers included in this series of test are: **SA13001-003**

USTL Report Number	Projectile	Highest Velocity (fps)	Lowest Velocity (fps)	Highest BFS (mm)	Lowest BFS (mm)	Perforations
SA13001	Fiocchi 9mm Luger 115gr FMJ	1229	1161	31.59	25.55	None
SA13002	Wolf 9mm Luger 115gr FMJ	1211	1154	29.09	27.18	None
SA13003	Winchester .40 S&W 180gr SXT	1019	979	27.84	25.03	None

The data presented is for the samples tested only; it does not guarantee the performance of other samples of the same or similar product. The test results do not imply endorsement by United States Test Laboratory.

The test samples are being shipped to you via UPS Ground. Should you have any questions, please feel free to call upon us.

Best regards,

Matt Lutz
Acting Facility Manager

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13001
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions

Temperature: 71 °F.
Humidity: 31 %
Clay Block No.: 9
Clay Temp.: 95.3 °F.
Drop (Avg.): 19.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211439	2216/2216	1.90	Wet	0	1	1	9mm	115 FMJ	465.9	1229	25.55
211439	2216/2216	1.90	Wet	0	2	2	9mm	115 FMJ	471.9	1214	28.44
211439	2216/2216	1.90	Wet	0	3	3	9mm	115 FMJ	479.2	1195	31.59
211439	2216/2216	1.90	Wet	45	4	4	9mm	115 FMJ	491.2	1166	No Perforation
211439	2216/2216	1.90	Wet	30	5	5	9mm	115 FMJ	479.5	1195	No Perforation
211439	2216/2216	1.90	Wet	0	6	6	9mm	115 FMJ	493.2	1161	No Perforation
										-	
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This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Fiocchii 9mm Luger, 115 gr. FMJ.
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Serial No.: 211439
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:

*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Landon/Nguyen/Zerger

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13002
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions
Temperature: 73 °F.
Humidity: 30 %
Clay Block No.: 9
Clay Temp.: 93.7 °F.
Drop (Avg.): 18.5 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211439	2216/2216	1.95	Wet	0	1	1	9mm	115 FMJ	477.8	1199	27.18
211439	2216/2216	1.95	Wet	0	2	2	9mm	115 FMJ	492.8	1162	29.09
211439	2216/2216	1.95	Wet	0	3	3	9mm	115 FMJ	496.4	1154	28.74
211439	2216/2216	1.95	Wet	45	4	4	9mm	115 FMJ	482.1	1188	No Perforation
211439	2216/2216	1.95	Wet	30	5	5	9mm	115 FMJ	473.0	1211	No Perforation
211439	2216/2216	1.95	Wet	0	6	6	9mm	115 FMJ	485.6	1180	No Perforation
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										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Wolf 9mm Luger, 115 gr. FMJ (bimetal jacket).
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Serial No.: 211439
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Landon/Nguyen/Zerger

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13003
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions
Temperature: 71 °F.
Humidity: 31 %
Clay Block No.: 9
Clay Temp.: 92.8 °F.
Drop (Avg.): 18.8 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211446	2216/2216	1.89	Wet	0	1	1	.40 S&W	180 SXT	584.9	979	25.03
211446	2216/2216	1.89	Wet	0	2	2	.40 S&W	180 SXT	579.6	988	27.05
211446	2216/2216	1.89	Wet	0	3	3	.40 S&W	180 SXT	579.2	989	27.84
211446	2216/2216	1.89	Wet	45	4	4	.40 S&W	180 SXT	563.3	1017	No Perforation
211446	2216/2216	1.89	Wet	30	5	5	.40 S&W	180 SXT	575.3	996	No Perforation
211446	2216/2216	1.89	Wet	0	6	6	.40 S&W	180 SXT	562.3	1019	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 3.00"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Winchester .40 Smith & Wesson, 180 gr. SXT.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Serial No.: 211446
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Landon/Nguyen/Zerger

Chesapeake TESTING

www.chesapeaketesting.com

15 October 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P), and Ballistic Resistance Test: Job No. 2049-123, Tested 7 and 8 October 2014, Purchase Order No. 0008797, Test Report No. CT-RD-14-1175

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 7 and 8 October 2014. This report includes a summary of the test as well as a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jmt

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

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POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008797
Report No.: CT-RD-14-1175

Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P) and Ballistic Resistance Test: Job No. 2049-123, Tested 7 and 8 October 2014

Prepared by:

Craig A. Thomas
Justine M. Tambourine

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

15 October 2014

Further dissemination only as directed by Survival Armor, October 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

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1 Introduction

Survival Armor provided eight armor samples to Chesapeake Testing for ballistic testing on 7 and 8 October 2014. This is a two part report. Section 2 is the Protection Ballistic Limit V_{50} BL(P) test report and Section 3 is the ballistic resistance test report. The Areal Density test is presented in Attachment A.

2 Protection Ballistic Limit Test, V_{50} BL(P)

Four armor samples were used for V_{50} testing. Prior to testing, the samples were sized and weighed. The results are shown in Table 1.

Table 1. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-123-1	225329	Proprietary	C-2	1.84
2049-123-2	225328	Proprietary	C-2	1.84
2049-123-3	225327	Proprietary	C-2	1.84
2049-123-4	225326	Proprietary	C-2	1.85

2.1 Threats and Instrumentation

2.1.1 Threats

The threats used for this V_{50} test were 2-, 4-, 16-, and 64-grain right circular cylinder (RCC) projectiles fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.1.2 Instrumentation

Projectile velocity measurements were obtained using a Physics Applications, 3-inch Mag-100, magnetic intervalometer system for the 2- & 4-grain projectiles; and projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs for the 16- & and 64-grain projectiles.

2.2 Details of Test

The objective of this test was to conduct a ballistic limit V_{50} performance test on the armor samples in accordance with DEA Armor Testing Protocol, MIL-STD-662F, and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with MIL-STD-662F. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (68 ±4°F).

SURVIVAL ARMOR PROPRIETARY INFORMATION

For each shot, the target was strapped to a 5.5-in clay backing that was clamped to a rigid test fixture. The projectile velocity for the initial shot against each sample was in accordance with the referenced performance standard. Velocities for subsequent shots were based on the result of the previous shot. The required ballistic limit (BL(P)) for each threat tested is presented in Table 2.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

2.3 Summary of Results

The results of the V_{50} ballistic limit testing are summarized in Table 2. The round-by-round data sheets and scatter plots for all testing performed are provided on the following pages.

The following is a list of abbreviations used in the test data sheets:

C = Complete penetration (same as CP).
Gap = For V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the complete penetration occurs at a higher velocity than the partial penetration.
HP = For V_{50} data, the highest velocity at which a partial penetration occurred.
LC = For V_{50} data, the lowest velocity at which a complete penetration occurred.
P = Partial penetration (same as PP).
ROR = Range of results; for V_{50} data, the difference between the highest and lowest velocities.
V_{50} = Statistical velocity at which the threat defeats the armor 50% of the time.
RMR = Range of mixed results; for V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the partial penetration occurs at a higher velocity than the complete penetration.
True = Round was used in calculating a V_{50} or an approximate V_{50}.
False = Round was not used in calculating a V_{50} or an approximate V_{50}.
NR = No velocity reading was obtained.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of V_{50} Ballistic Limit Test Results

Job No.	Sample No.	Threat	Target Obliq. (deg)	Required Ballistic Limit (BL(P))	Ballistic Limit Data				
					V_{50} (ft/s)	No. of Points	RMR (ft/s)	GAP (ft/s)	ROR (ft/s)
2049-123-1	225329	2-grain RCC	0.0	2735	2907	6	89	NA	107
2049-123-2	225328	4-grain RCC	0.0	2420	2532	6	NA	20	122
2049-123-3	225327	16-grain RCC	0.0	2080	2105	6	74	NA	74
2049-123-4	225326	64-grain RCC	0.0	1620	1657	6	40	NA	108

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-1
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225329

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2735 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 8.000	Range No.:	1
Witness Panel:	Clay	Primary Vel. Location (ft):	6.500	Temp:	64.4 °F
Obliquity:	0.0°	Range to Target (ft):	10.000	BP:	29.8 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	6.000	RH:	49.5%
Condition:	Ambient			Barrel/Gun:	CDS-0403
				Gunner:	Matt Rixham
				Recorder:	Joe Moore

Ammunition

Projectile	Lot No.	Powder
(1) 2-grain RCC	9132	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.5 mm, 17.3 mm, 19.5 mm, 17.8 mm, 17.2 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	6.2	1006.0	2982	2855	C	True	
2	6.0	1036.3	2895	2771	P	False	
3	6.1	1032.2	2906	2782	P	False	
4	6.2	1007.6	2977	2851	P	True	
5	6.3	1026.4	2923	2798	P	False	
6	6.4	980.0	3061	2932	C	True	
7	6.3	NR	NR	NR	P	False	(a)
8	6.3	990.8	3028	2900	P	True	
9	6.4	976.0	3074	2944	P	True	
10	6.5	971.5	3088	2958	C	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 57
Block temp.: 92.9 °F

Footnotes:
(a) No velocity reading was obtained.

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2907 ft/s
High Partial:	2944 ft/s
Low Complete:	2855 ft/s
Range of Results (ROR):	107 ft/s
Range of Mix Results (RMR):	89 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

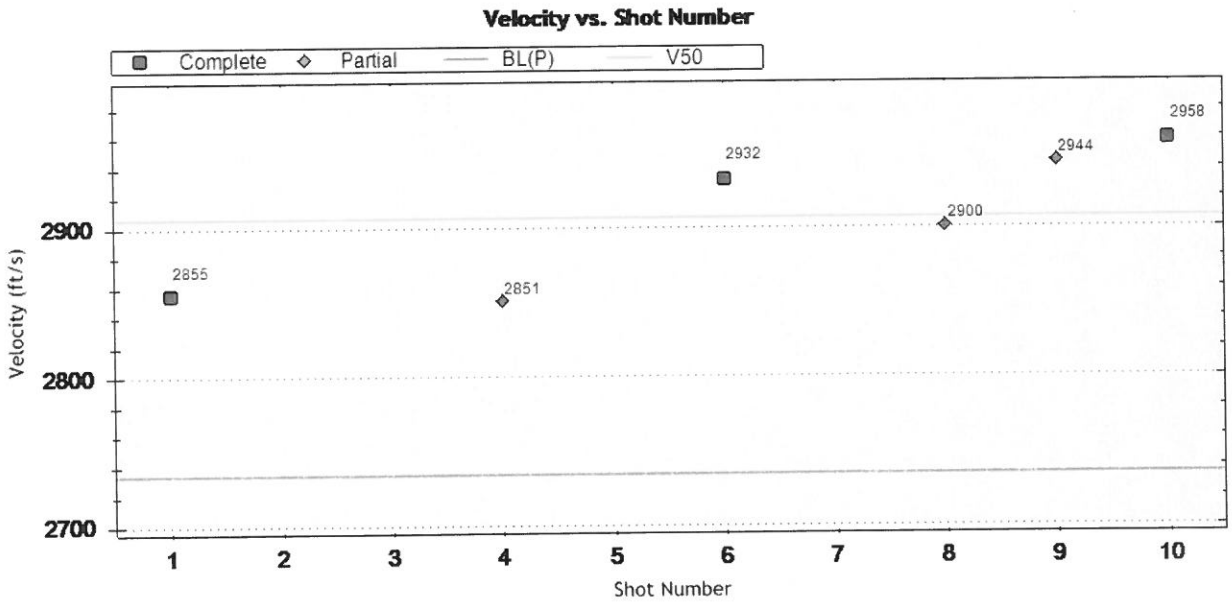
Client: Survival Armor
Job No.: 2049-123-1
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225329

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2907 ft/s
High Partial:	2944 ft/s
Low Complete:	2855 ft/s
Range of Results (ROR):	107 ft/s
Range of Mix Results (RMR):	89 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-2
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225328

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2420 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 8.000	Range No.:	1
Witness Panel:	Clay	Primary Vel. Location (ft):	6.500	Temp:	64.4 °F
Obliquity:	0.0°	Range to Target (ft):	10.000	BP:	29.9 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	6.000	RH:	47.7%
Condition:	Ambient			Barrel/Gun:	CDS-0403
				Gunner:	Matt Rixham
				Recorder:	Joe Moore

Ammunition

Projectile	Lot No.	Powder
(1) 4-grain RCC	9139	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.5 mm, 17.3 mm, 19.5 mm, 17.8 mm, 17.2 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	5.3	1118.9	2681	2594	C	True	
2	5.1	1149.3	2610	2525	P	True	
3	5.2	1140.4	2631	2545	C	True	
4	5.0	1155.4	2597	2511	P	True	
5	5.2	1140.1	2631	2545	C	True	
6	5.0	1173.6	2556	2472	P	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 57
Block temp.: 92.9 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2532 ft/s
High Partial:	2525 ft/s
Low Complete:	2545 ft/s
Range of Results (ROR):	122 ft/s
Range of Mix Results (RMR):	NA
Gap:	20 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

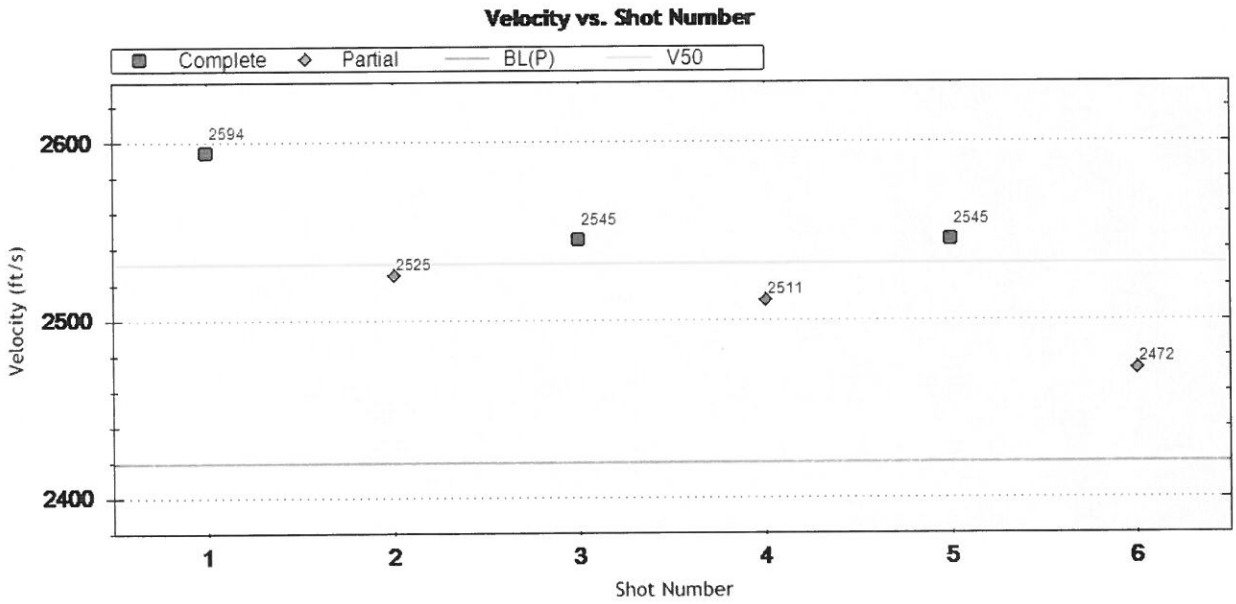
Client: Survival Armor
Job No.: 2049-123-2
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225328

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2532 ft/s
High Partial:	2525 ft/s
Low Complete:	2545 ft/s
Range of Results (ROR):	122 ft/s
Range of Mix Results (RMR):	NA
Gap:	20 ft/s



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-3
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225327

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2080 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 5.333, 9.666, 10.000	Range No.:	7
Witness Panel:	Clay			Temp:	70.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	7.500	BP:	29.97 inHg
Backing Material:	5.5-in clay	Range to Target (ft):	15.000	RH:	41%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CDS-0403
				Gunner:	Sam Swank
				Recorder:	Josh Smith

Ammunition

Projectile	Lot No.	Powder
(1) 16-grain RCC	9189	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.7 mm, 18.8 mm, 17.9 mm, 17.8 mm, 17.6 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	9.0	2153	2322	1862	2327	2325	2209	C	False	
2	8.5	2298	2176	1988	2180	2178	2069	C	True	
3	8.2	2360	2119	2042	2122	2120	2014	P	False	
4	8.4	2316	2159	2002	2164	2162	2054	P	False	
5	8.6	2282	2191	1972	2197	2194	2085	C	True	
6	8.5	2298	2176	1988	2180	2178	2069	P	False	
7	8.6	2266	2207	1961	2210	2208	2098	P	False	
8	8.7	2248	2224	1943	2230	2227	2116	P	True	
9	8.8	2218	2254	1919	2258	2256	2143	P	True	
10	9.0	2158	2317	1865	2323	2320	2204	C	False	
11	8.9	2236	2236	1935	2239	2238	2126	P	True	
12	9.0	2275	2198	1970	2199	2199	2089	C	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 58
Block temp.: 98.4 °F, 96.8 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2105 ft/s
High Partial:	2143 ft/s
Low Complete:	2069 ft/s
Range of Results (ROR):	74 ft/s
Range of Mix Results (RMR):	74 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

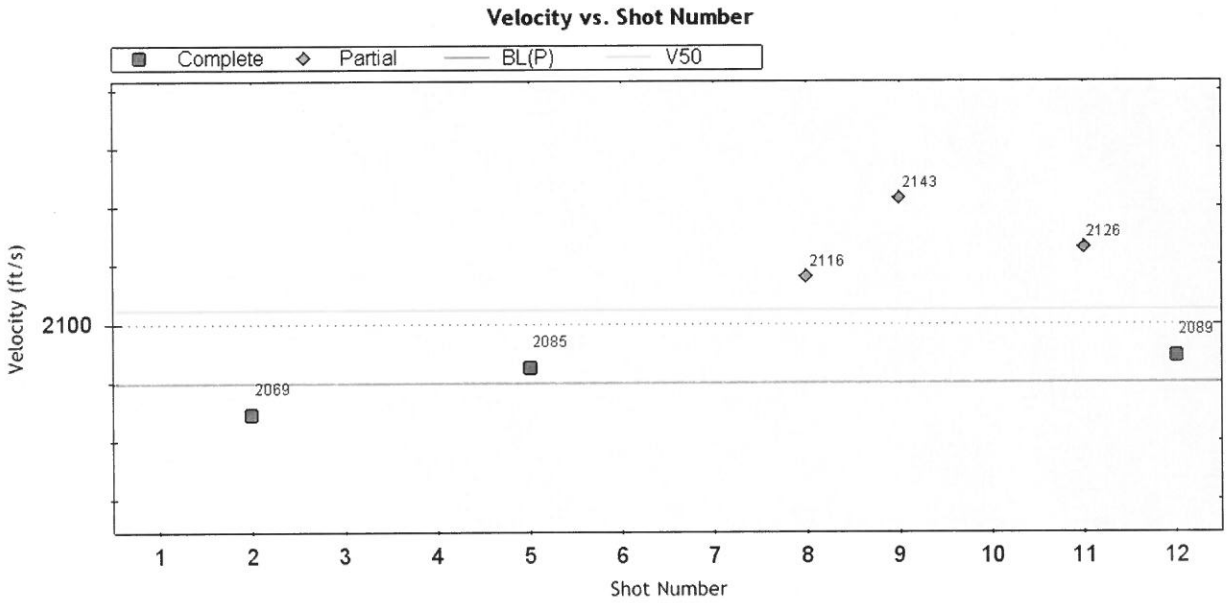
Client: Survival Armor
Job No.: 2049-123-3
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225327

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2105 ft/s
High Partial:	2143 ft/s
Low Complete:	2069 ft/s
Range of Results (ROR):	74 ft/s
Range of Mix Results (RMR):	74 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-4
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225326

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.85 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	1620 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 5.333, 9.666, 10.000	Range No.:	7
Witness Panel:	Clay			Temp:	70.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	7.500	BP:	29.97 inHg
Backing Material:	5.5-in clay	Range to Target (ft):	15.000	RH:	40%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CDS-0600
				Gunner:	Sam Swank
				Recorder:	Josh Smith

Ammunition

Projectile	Lot No.	Powder
(1) 64-grain RCC	9166	IMR 4350

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.4 mm, 18.0 mm, 19.0 mm, 17.5 mm, 17.1 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	100.0	2839	1761	2458	1763	1762	1710	C	False	
2	96.0	2873	1740	2487	1742	1741	1690	P	True	
3	98.0	2788	1793	2406	1801	1797	1744	C	False	
4	96.0	2921	1712	2529	1713	1713	1662	C	True	
5	94.0	2848	1756	2456	1764	1760	1708	C	True	
6	92.0	2944	1698	2548	1701	1699	1650	C	True	
7	89.0	2975	1681	2575	1683	1682	1633	P	True	
8	89.5	3042	1644	2624	1651	1647	1600	P	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 58
Block temp.: 97.6 °F, 96.5 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	1657 ft/s
High Partial:	1690 ft/s
Low Complete:	1650 ft/s
Range of Results (ROR):	108 ft/s
Range of Mix Results (RMR):	40 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

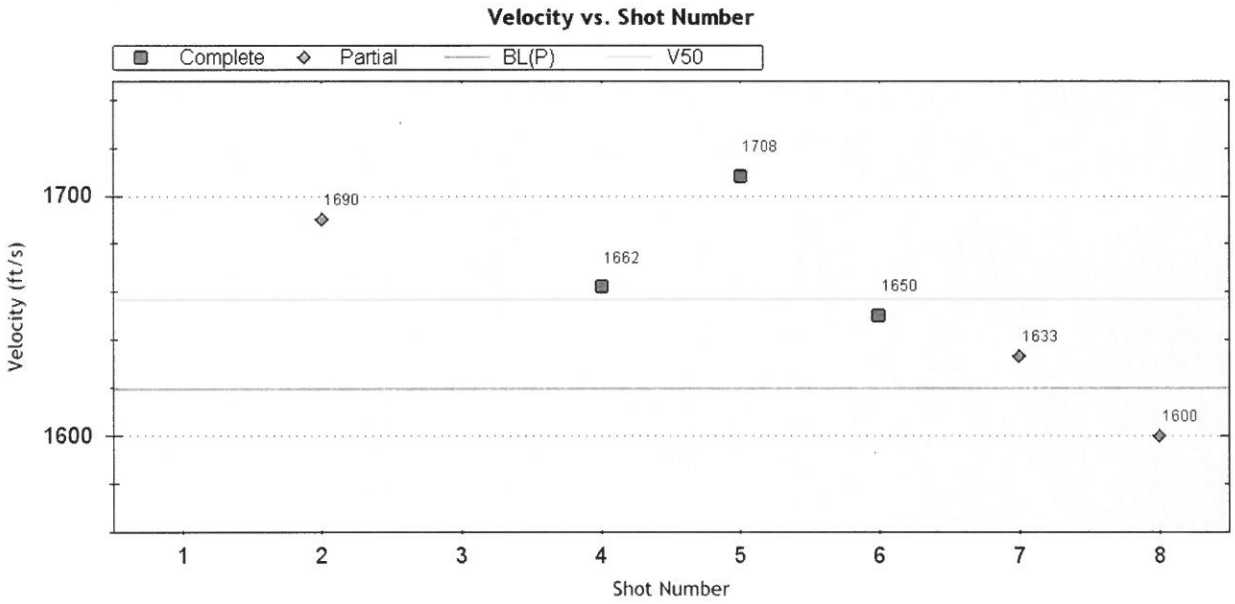
Client: Survival Armor
Job No.: 2049-123-4
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225326

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	1657 ft/s
High Partial:	1690 ft/s
Low Complete:	1650 ft/s
Range of Results (ROR):	108 ft/s
Range of Mix Results (RMR):	40 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

3 Ballistic Resistance Testing

Four armor samples were used for ballistic resistance testing. Prior to testing, the samples were sized and weighed. The results are shown in Table 3.

Table 3. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-123-A	225325	Proprietary	C-2	1.84
2049-123-B	225324	Proprietary	C-2	1.85
2049-123-C	225323	Proprietary	C-2	1.84
2049-123-D	225322	Proprietary	C-2	1.84

3.1 Threats and Instrumentation

3.1.1 Threats

The threats used for this ballistic resistance test were:

- 9-mm NATO, 124-grain full metal jacketed (FMJ) projectiles.
- 9-mm, 127-grain supreme expansion technology (SXT) projectiles.
- .40-cal., 165-grain S&W Speer gold dot hollow point (GDHP) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

3.1.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs. A digital caliper was used to measure the post-impact deformations observed in the backing clay for select shots.

3.2 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with DEA Armor Testing Protocol and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with the referenced performance standard. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (64 ±1 °F).

SURVIVAL ARMOR PROPRIETARY INFORMATION

The sample for Job No. 2049-123-A was tested under ambient conditions. The sample for Job No. 2049-123-B was conditioned at +150 °F (+66 °C); and the sample for Job No. 2049-123-C was conditioned at -20 °F (-29 °C) for no less than 15 to 18 hours prior to testing. The sample for Job No. 2049-123-D was submerged in water for 20 to 25 minutes prior to testing. For each shot, the target was strapped to a 5.5-in clay/plywood backing that was clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

3.3 Summary of Results

The results of the ballistic resistance test are shown in Table 4. The round-by-round data sheets for all ballistic resistance testing performed are presented on the following pages.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 4. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Threat	Target Obliquity (deg)	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Def. (mm)
2049-123-A	225325	9-mm NATO, 124-grain FMJ	0.0	1	1403	None	29.1
				2	1413	None	24.7
				3	1412	None	25.1
				4	1407	None	NA
				5	1420	None	NA
				6	1423	None	24.8
				7	1408	None	34.6
				8	1432	None	36.0
				9	NR[a]	None	29.2
		.40-cal., 165-grain S&W Speer (GDHP)	0.0	10	NR[a]	None	26.4
		9-mm, 127-grain SXT	0.0	11	NR[a]	None	28.3
2049-123-B	225324	9-mm NATO, 124-grain FMJ	0.0	1	1416	None	24.0
				2	1419	None	23.8
				3	1420	None	23.1
2049-123-C	225323	9-mm NATO, 124-grain FMJ	0.0	1	1412	None	29.3
				2	1413	None	22.9
				3	1416	None	27.4
2049-123-D	225322	9-mm NATO, 124-grain FMJ	0.0	1	1423	None	24.4
				2	1411	None	24.5
				3	1430	None	24.8

[a] Contact shot

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-A
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225325

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.84 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay		Temp: 64.9 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Range to Target (ft): 17.200	RH: 63.6%
Condition: Ambient	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory
(3) .40-cal., 165-grain S&W Speer (GDHP)	Speer	Factory

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.5 mm, 19.0 mm, 19.4 mm, 19.0 mm, 18.0 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3564	1403	3088	1403	1403	None	29.1	(a)
2	1	3538	1413	3065	1414	1413	None	24.7	(a)
3	1	3541	1412	3068	1412	1412	None	25.1	(a)
4	1	3554	1407	3080	1407	1407	None	NA	(b)
5	1	3521	1420	3050	1421	1420	None	NA	(b)
6	1	3514	1423	3045	1423	1423	None	24.8	(b)
7	1	3551	1408	3076	1409	1408	None	34.6	(c)
8	1	3491	1432	3025	1432	1432	None	36.0	(c)
9	1	NR	NR	NR	NR	NR	None	29.2	(d, e)
10	3	NR	NR	NR	NR	NR	None	26.4	(d, f)
11	2	NR	NR	NR	NR	NR	None	28.3	(d, g)

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.4 °F

Footnotes:
(a) Dry Test
(b) Multiple round test (no Smoothing)
(c) Edge test
(d) Contact shot
(e) Average velocity: 1420 ft/s
(f) Average velocity: 1131 ft/s
(g) Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-B
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225324

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.85 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 64.7 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 58.9%
Condition: +150 °F for no less than 15 to 18 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.4 mm, 19.6 mm, 18.7 mm, 18.9 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3530	1416	3059	1416	1416	None	24.0	
2	1	3524	1419	3053	1419	1419	None	23.8	
3	1	3522	1420	3051	1420	1420	None	23.1	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.0 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-C
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225323

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	DEA requirements	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Clay			Temp:	64.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	5.5-in clay/plywood	Range to Target (ft):	17.200	RH:	60.7%
Condition:	-20 °F for no less than 15 to 18 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.4 mm, 19.6 mm, 18.7 mm, 18.9 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3541	1412	3068	1412	1412	None	29.3	
2	1	3539	1413	3066	1413	1413	None	22.9	
3	1	3531	1416	3060	1416	1416	None	27.4	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.0 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-D
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225322

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	DEA requirements	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Clay			Temp:	64.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	5.5-in clay/plywood	Range to Target (ft):	17.200	RH:	59.9%
Condition:	Submerged in water for 20 to 25 minutes	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.0 mm, 18.0 mm, 18.4 mm, 17.3 mm, 17.7 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3513	1423	3044	1423	1423	None	24.4	
2	1	3544	1411	3070	1411	1411	None	24.5	
3	1	3499	1429	3030	1430	1430	None	24.8	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 97.2 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

Chesapeake TESTING

www.chesapeaketesting.com

10 September 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-122, Tested 9 September 2014, Purchase Order No. 0008530, Test Report No. CT-RD-14-1011

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 9 September 2014. This report includes a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jmt

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

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POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008530
Report No.: CT-RD-14-1011

Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-122, Tested 9 September 2014

Prepared by:

Craig A. Thomas
Justine M. Tambourine

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

10 September 2014

Further dissemination only as directed by Survival Armor, September 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

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BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-1
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263317 Test 1

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.29 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.1%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3507	1426	3035	1428	1427	None	
2	1	3515	1422	3042	1424	1423	None	
3	1	3488	1433	3019	1435	1434	None	
4	1	3500	1429	3028	1431	1430	None	(a)
5	1	3464	1443	2997	1446	1445	None	(a)
6	1	3462	1444	2996	1446	1445	None	(a)
7	1	3431	1457	2969	1459	1458	None	(b)
8	1	3433	1456	2971	1458	1457	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-2
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263317 Test 2

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.29 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block	Primary Vel. Location (ft):	9.000	Temp:	65.3 °F
Obliquity:	0.0°	Range to Target (ft):	17.200	BP:	30 inHg
Backing Material:	Gelatin block	Target to Witness (in):	0.000	RH:	59.7%
Condition:	Ambient			Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3453	1448	2988	1450	1449	None	
2	1	3472	1440	3005	1442	1441	None	
3	1	3479	1437	3010	1440	1438	None	
4	1	3469	1441	3001	1444	1443	None	(a)
5	1	3470	1441	3003	1443	1442	None	(a)
6	1	3474	1439	3007	1441	1440	None	(a)
7	1	3451	1449	2987	1451	1450	None	(b)
8	1	3464	1443	2998	1445	1444	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-3
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263319 Test 1

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.30 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	60%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+WSpeer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Remington	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2992	1448	1447	None	
2	1	3518	1421	3045	1423	1422	None	
3	1	3487	1434	3018	1436	1435	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity: 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-4
Test Date: 9/9/2014

Test Panel Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1408263319 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.1 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.9%
Condition: +140 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+WSpeer (GDHP)	Speer	Accurate No. 2
(4) .45 Auto, 230-grain BJHP	Remington	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3466	1443	2999	1445	1444	None	
2	1	3470	1441	3003	1443	1442	None	
3	1	3483	1436	3013	1438	1437	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity: 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-5
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263316 Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.31 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.1%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3476	1438	3008	1440	1439	None	
2	1	3460	1445	2994	1447	1446	None	
3	1	3455	1447	2990	1449	1448	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-6
Test Date: 9/9/2014

Test Panel — **Description:** Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — **Sample No.:** 1408263316 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 60.8%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3517	1422	3043	1424	1423	None	
2	1	3474	1439	3006	1441	1440	None	
3	1	3488	1433	3018	1436	1435	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-7
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1403263318 Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.6%
Condition: Submerged in water for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3544	1411	3067	1413	1412	None	
2	1	3497	1430	3026	1432	1431	None	
3	1	3499	1429	3027	1431	1430	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.64 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-8
Test Date: 9/9/2014

Test Panel Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1403263318 Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.28 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.7%
Condition: Submerged in water for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3500	1429	3029	1431	1430	None	
2	1	3458	1446	2993	1448	1447	None	
3	1	3472	1440	3004	1442	1441	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.57 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-9
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263314 Tumbled Test 3

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.30 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.8%
Condition:	NIJ-STD-0101.06 Section 5 for 12 days/Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3481	1436	3012	1439	1437	None	
2	1	3483	1436	3014	1438	1437	None	
3	1	3508	1425	3036	1427	1426	None	
4	1	3457	1446	2992	1448	1447	None	(a)
5	1	3469	1441	3002	1443	1442	None	(a)
6	1	3451	1449	2986	1451	1450	None	(a)
7	1	3455	1447	2989	1450	1448	None	(b)
8	1	3481	1436	3011	1439	1438	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-10
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263314 Tumble Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 60.9%
Condition: NIJ-STD-0101.06 Section 5 for 12 days/Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3487	1434	3017	1436	1435	None	
2	1	3454	1448	2988	1450	1449	None	
3	1	3449	1450	2985	1452	1451	None	
4	1	3468	1442	3001	1444	1443	None	(a)
5	1	3450	1449	2985	1452	1450	None	(a)
6	1	3457	1446	2992	1448	1447	None	(a)
7	1	3453	1448	2988	1450	1449	None	(b)
8	1	3451	1449	2986	1451	1450	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-11
Test Date: 9/9/2014

Test Panel — **Description:** Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — **Sample No.:** 1408263312 Tumbled Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.31 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.5%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+W Speer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Remington	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3483	1436	3014	1438	1437	None	
2	1	3491	1432	3021	1434	1433	None	
3	1	3449	1450	2985	1452	1451	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-12
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263312 Tumbled Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.39 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.1 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.2%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/+140 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+W Speer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Speer	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2979	1455	1453	None	
2	1	3440	1453	2974	1457	1455	None	
3	1	3460	1445	2994	1447	1446	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-13
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263310 Tumbled Test 3

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.29 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.4%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/-40 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2980	1454	1453	None	
2	1	3464	1443	2998	1445	1444	None	
3	1	3524	1419	3049	1421	1420	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-14
Test Date: 9/9/2014

Test Panel — **Description:** Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — **Sample No.:** 1408263310 Tumbled Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.41 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.1 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/-40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3534	1415	3058	1417	1416	None	
2	1	3524	1419	3049	1421	1420	None	
3	1	3466	1443	2999	1445	1444	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-15
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263313 Tumbled Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.30 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 60.9%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/Submerged in water for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3495	1431	3025	1432	1432	None	
2	1	3449	1450	2984	1452	1451	None	
3	1	3477	1438	3010	1440	1439	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 3.74 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-16
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263313 Tumbled Test 2

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.31 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.2%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2988	1450	1448	None	
2	1	3466	1443	2999	1445	1444	None	
3	1	3440	1453	2977	1455	1454	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.69 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

National Institute of Justice (NIJ)

Approved Test Laboratory
For Personal Body Armor

Expiration Date:
April 30, 2016

National Technical Systems
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone (316) 832-1600 Fax (316) 832-1602
www.nts.com/locations/wichita

NVLAP®

NVLAP LAB CODE: 200818-0

Approved Signatory: Matthew Lutz

FLEXIBLE ARMOR: P-BFS TEST

Date Received: 01/30/14
Via: UPS
Returned Via: UPS

Record No.: SA14002
Test Date: 01/30/14
Customer: Survival Armor, Inc.

Test Conditions	Pre	
Temperature:	70	°F.
Humidity:	36	%
Clay Block No.:	9	
Clay Temp.:	98.3	°F.
Drops (Avg.):	19.91	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.42 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.29 ft.
Midpoint to Target:	8.16 ft.
Target to Witness:	0 ft.
Barrel Length:	4 in.
Clay Block:	5.5 in.

Sample Description			Test / Ammunition Description						Chronograph		Results
Model Number	Panel Weight (lbs.)	Panel Size	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-IIIA	1.98	2015-2015	Wet	0	1	1	5.7x28mm	40/Blue Tip	339.4	1688	20.47
LW-IIIA	1.98	2015-2015	Wet	0	2	2	5.7x28mm	40/Blue Tip	331.0	1731	18.65
LW-IIIA	1.98	2015-2015	Wet	0	3	3	5.7x28mm	40/Blue Tip	332.7	1722	20.45
LW-IIIA	1.98	2015-2015	Wet	45	4	4	5.7x28mm	40/Blue Tip	332.0	1725	No Perforation
LW-IIIA	1.98	2015-2015	Wet	30	5	5	5.7x28mm	40/Blue Tip	332.4	1723	No Perforation
LW-IIIA	1.98	2015-2015	Wet	0	6	6	5.7x28mm	40/Blue Tip	334.3	1713	No Perforation
										-	
										-	
										-	
										-	

This test report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST, NIJ or any agency of the Federal Government. This report contains data that are not covered by the NVLAP accreditation. This test was performed in accordance with the specification requirements listed in addition to any customer testing modifications or requests. The test results properly reflect the ballistic performance of the listed sample. This test report shall not be reproduced except in full without written approval of National Technical Systems.

Test Remarks/Notes:

Test Round Used:
FNH 5.7x28 SS 197, 40gr (Blue Tip) @ factory velocity.

Sample Tested:

Manufacturer:	Survival Armor, Inc.
Model No.:	LW-IIIA
Style:	Male
Sample No.:	224526
Size:	2015-2015
Weight (lbs.):	1.98
Threat Level:	IIIA
DoM:	1/24/2014
Panel Side:	Front

Sample Description:
No sample description per customer request.

Project Manager: Nguyen

Range Technician(s): Zerger/Wilson

National Institute of Justice (NIJ)

Approved Test Laboratory
For Personal Body Armor

Expiration Date:
April 30, 2016

National Technical Systems
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone (316) 832-1600 Fax (316) 832-1602
www.nts.com/locations/wichita

NVLAP®

NVLAP LAB CODE: 200818-0

Approved Signatory: Matthew Lutz

Scope of Accreditation for Personal Body Armor Testing:

Record No.: SA14002

Effective Dates: 2013-10-1 through 2014-9-30

NVLAP Code:	Test Method Designation:	Test Method Description
29/A01	NIJ 0101.06, July 2008, Section 7	Ballistic Resistance of Body Armor, Section 7: Ballistic Test Methods
29/A02	NIJ 0101.04, Rev. 2001	Ballistic Resistance of Personal Body Armor
29/B01	NIJ 0101.06, July 2008, Section 5	Ballistic Resistance of Body Armor, Section 5: Flexible Armor Conditioning Protocol
29/B02	NIJ 0101.06, July 2008, Section 6	Ballistic Resistance of Body Armor, Section 6: Hard Armor Conditioning Protocol
29/C01	NIJ 0115.00	Stab Resistance of Personal Body Armor

Test Methods Used:

1) Backing Material Surface Preparation (Section 4.2.5.4): Planar

2) Strapping Method (Section 7.7.2.1): (Figure 13. A) Standard Strapping Arrangement for Smaller Samples: Two vertical straps and three horizontal straps

3) Shot-to-edge spacing: 2.0 - 2.75" Shot-to-shot spacing: 2.0" minimum

4) Shot locations marked per Section 7.8.1

5) Panel tested according to Section 7.8.2 Armor Submersion.

Customer Specified Testing Instructions:
1.Customer requested threat 1 shot to edge distance.

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems, Wichita Division
Report Identification Number: 13N019
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002212
Manufacturer: Survival Armor

Report Date: 01/07/14
NIJ Armor Type: 3A

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Sample 1 **Size:** C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1490	0	28.08		1480	0	29.82	
2	1462	0	33.02		1462	0	30.45	
3	1470	0	30.17		1461	0	29.33	
4	1468	0			1482	0		
5	1477	0			1474	0		
6	1441	0			1453	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.4 mm
Pass - No BFS greater than 44 mm

Sample 2 **Size:** C-5

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1464	0	29.86		1476	0	27.35	
1462	0	29.01		1450	0	27.95	
1475	0	33.36		1479	0	29.5	
1488	0			1465	0		
1481	0			1477	0		
1449	0			1450	0		

BFS Statistics: Count: 12
Average: 29.83 mm
St. Dev: 1.83195 mm

Sample 3 **Size:** C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1470	0	28.07		1482	0	30.17	
2	1471	0	28.5		1467	0	27.57	
3	1448	0	27.76		1449	0	30.39	
4	1459	0			1466	0		
5	1466	0			1446	0		
6	1463	0			1475	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 30.4 mm
Pass - No BFS greater than 44 mm

Sample 4 **Size:** C-1

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1473	0	29.25		1473	0	29.13	
1495	0	29.46		1486	0	29.35	
1458	0	29.21		1473	0	28.72	
1477	0			1455	0		
1461	0			1464	0		
1469	0			1473	0		

BFS Statistics: Count: 12
Average: 28.97 mm
St. Dev: 0.88007 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5			Size: C-5						Sample 6			Size: C-5					
	Front Panel				Back Panel					Front Panel				Back Panel				
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	
1	1444	0	37.58		1427	0	39.82			1446	0	44.44		1453	0	36.55		
2	1441	0	39.96		1424	0	41.3			1440	0	36.82		1446	0	36.07		
3	1438	0	39.13		1430	0	39.22			1434	0	38.4		1443	0	38.87		
4	1437	0			1421	0				1442	0			1426	0			
5	1441	0			1425	0				1416	0			1427	0			
6	1446	0			1444	0				1431	0			1450	0			
7																		
8																		

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 39.01 mm
Maximum BFS: 44.4 mm k1: 1.568 St. Dev: 2.30166 mm
Pass - BFS within Tolerance Limit Upper Tolerance Limit (80%/95%): 42.6 mm

	Sample 7			Size: C-1						Sample 8			Size: C-1					
	Front Panel				Back Panel					Front Panel				Back Panel				
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note		Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	
1	1416	0	39.41		1431	0	39.36			1421	0	40.85		1437	0	40.39		
2	1418	0	37.95		1450	0	39.1			1436	0	37.23		1426	0	37.71		
3	1431	0	38.7		1422	0	37.8			1431	0	37.17		1444	0	38.86		
4	1444	0			1428	0				1433	0			1422	0			
5	1453	0			1427	0				1429	0			1421	0			
6	1453	0			1432	0				1434	0			1422	0			
7																		
8																		

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 38.71 mm
Maximum BFS: 40.8 mm St. Dev: 1.1854 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1448	0	28.24		1405	0	29.4		1412	0	29.54		1424	0	27.75	
2	1417	0	29.85		1435	0	33.74		1410	0	30.46		1418	0	28.48	
3	1425	0	33.74		1411	0	33.5		1427	0	30.97		1427	0	29.67	
4	1417	0			1425	0			1426	0			1431	0		
5	1426	0			1400	0			1429	0			1430	0		
6	1400	0			1413	0			1420	0			1409	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 33.74 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 30.97 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1343	0	34.9		1344	0	36.44		1348	0	39.44		1341	0	35.72	
2	1343	0	39.36		1335	0	42.39		1362	0	38.12		1347	0	38.06	
3	1351	0	39.99		1342	0	42.29		1346	0	42.12		1339	0	37.78	
4	1331	0			1340	0			1344	0			1319	0		
5	1331	0			1335	0			1345	0			1326	0		
6	1340	0			1344	0			1340	0			1342	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 42.39 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 42.12 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned

0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only

Maximum BFS: **44.4 mm** **Maximum Upper Tolerance Limit (80% probability with 95% confidence):** **42.6 mm**

This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item b.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1456	0		1472	0		1467	0		1471	0	*Panel tested on 1/4/13 on Range 2	1477	0	
2	1577	0		1570	0		1554	0		1599	0	Crawford/Childers/Nguyen	1581	0	
3	1667	0		1682	0		1660	0		1666	0		1690	0	
4	1721	0		1770	0		1773	0		1777	0		1766	0	
5	1807	0		1861	1		1874	1		1858	1		1814	1	
6	1886	1		1780	0		1793	0		1805	1		1799	1	
7	1851	1		1841	1		1840	0		1718	0		1718	0	
8	1758	0		1785	0		1881	0		1768	0				*No reading due to chronograph error.
9	1802	0		1850	0		1926	0		1779	0		1763	0	Repeated same charge at new location.
10	1858	0		1878	0		1928	1		1866	0		1813	0	
11	1833	0		1942	1		1911	0		1904	0		1839	0	
12	1949	0		1877	1		1927	0		1906	0		1906	0	
13													1968	0	
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1453	0	*Switched to 14" barrel due to excessive	1446	0		1465	0		1449	0		1452	0	
2	1573	0	chamber pressures.	1575	0		1561	0		1591	0		1567	0	
3	1663	0		1663	0		1676	0		1684	0		1665	0	
4	1746	0		1749	1		1774	0		1769	0		1753	0	
5	1822	0		1656	0		1861	0		1832	1		1859	0	
6	1901	1		1743	0		1959	1		1761	0		1950	1	
7	1838	1		1785	0		1867	1		1813	0		1863	1	
8	1801	0		1813	0		1769	0		1894	0		1788	1	
9	1833	0		1884	1		1853	0		1909	1		1734	0	
10	1904	0		1823	0		1922	0		1875	0		1757	0	
11	1919	1		1881	0		1936	1		1923	0		1851	0	
12	1889	0		1901	0		1908	1		1983	0		1882	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	26	Requires review
Stops (Partial Penetrations)	94	Acceptable
Perforations below 1500 ft/s:	0	Acceptable

Regression Analysis

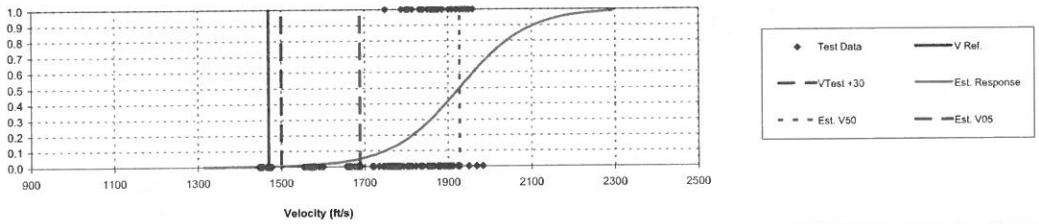
Regression Model: **Logistic**

Estimated V50: 1927 ft/s

Estimated V05: 514.5 m/s (1688) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.36%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1425	0		1425	0		1435	0		1521	0		1437	0		1430	0	
2	1526	0		1531	0		1521	0		1632	0		1515	0		1520	0	
3	1629	0		1609	0		1632	0		1692	0		1615	0		1608	0	
4	1715	0		1707	0		1692	0		1746	0		1710	0		1717	0	
5	1739	0		1800	1		1746	0		1821	1		1795	1		1792	1	
6	1820	1		1724	1		1821	1		1739	1		1709	1		1708	1	
7	1743	1		1634	0		1739	1		1665	1		1643	0		1633	0	
8	1664	1		1696	0		1665	1		1566	0		1694	0		1690	0	
9	1573	0		1730	0		1566	0		1627	0		1743	1		1726	0	
10	1642	0		1799	1		1627	0		1701	0		1676	0		1779	1	
11	1688	0		1743	1		1701	0		1760	0		1748	1		1719	1	
12	1746	0		1686	0		1760	0					1697	0		1711	0	
13																		
14																		
15																		

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1455	0		1451	0		1431	0		1450	0		1440	0	
2	1507	0		1518	0		1514	0		1530	0		1519	0	
3	1633	0		1601	0		1625	0		1622	0		1615	0	
4	1687	0		1709	0		1713	0		1701	0		1714	1	
5	1799	0		1803	1		1800	0		1802	0		1630	0	
6	1859	1		1736	1		1879	1		1880	1		1688	0	
7	1802	1		1643	0		1808	1		1796	1		1738	1	
8	1724	1		1692	1		1737	0		1733	0		1690	1	
9	1639	0		1639	0		1762	1		1774	1		1646	0	
10	1679	1		1701	1		1700	1		1719	0		1695	1	
11	1628	0		1640	0		1664	0		1767	0		1646	0	
12	1696	0		1700	0		1725	1		1844	1		1692	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	39	Acceptable
Stops (Partial Penetrations):	81	Acceptable
Perforations below 1460 ft/s:	0	Acceptable

Regression Analysis

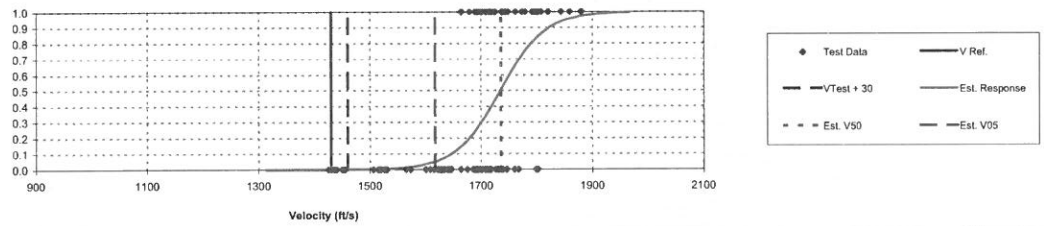
Regression Model: **Logistic**

Estimated V50: 1735 ft/s

Estimated V05: 492.8 m/s (1617) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **0.05%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1406	0		1408	0	
2	1515	0		1547	0	
3	1636	0		1651	0	
4	1736	0		1697	0	
5	1788	1		1800	0	
6	1694	0		1892	0	
7	1776	0		1955	1	
8	1807	1		1891	1	
9	1756	0		1780	0	
10	1833	0		1851	0	
11	1892	1		1874	1	
12	1804	0		1809	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1855 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1346	0		1368	0	
2	1447	0		1443	0	
3	1549	1		1519	0	
4	1451	0		1624	0	
5	1510	0		1710	1	
6	1547	0		1656	0	
7	1612	0		1679	0	
8	1675	0		1732	1	
9	1694	0		1687	0	
10	1765	1		1739	1	
11	1704	1		1695	0	
12	1642	0		1721	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1718 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditione
This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only
Threat 1: 0.36%
Threat 2: 0.05%
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NTS

www.nts.com

January 8, 2014

Mr. Ken Mueller
Survival Armor Inc.
12621 Corporate Lakes Dr. Unit 8
Fort Myers, FL 33913

Dear Mr. Mueller:

In accordance with your instructions, National Technical Systems, Inc. conducted Ballistic Resistance Testing of body armor submitted by **Survival Armor Test ID # SUR09-002212,** which were received on December 26th and December 31st, 2013. Testing was witnessed by Ken Mueller, a representative of the manufacturer.

The testing, which was authorized by NLECTC, was conducted in accordance with the requirements of NIJ Standard-0101.06, Ballistic Resistance Testing of Police Body Armor, dated July, 2008, and all changes, verbal and written, authorized by NLECTC as of the date of the testing. The results of this test are to be used to determine the compliance of the armor in conjunction with the U. S. Department of Justice's voluntary compliance testing program for armor intended for use by Law Enforcement officers. National Technical Systems, Inc. is not empowered to issue or deny this compliance status; however, the attached data indicates that this sampling of **Test ID # SUR09-002212 did satisfy** the ballistic requirement of NIJ Standard-0101.06 prerequisites to issuance of compliance status for **threat level IIIA** protection.

In addition to the required ballistic test data that has been provided on the official Compliance Test Report (form provided/mandated by NLECTC). The testing included:

Flexible Armor Conditioning Protocol. Conditioned in accordance with Section 5.
Label Permanency and Durability Section 4.1.5.3. Results: PASS

As required, two complete test samples and a copy of this report are being forwarded to NLECTC. The remaining samples will be returned to you via UPS Ground. Please refer to **NTS report number 13N019** for test details.

Sincerely,

Matt Lutz
Division Manager

National Technical Systems, Inc.

7447 W. 33rd Street N., Wichita, KS 67205 Main: 316-832-1600 Fax: 316-832-1602

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems, Wichita Division
Report Identification Number: 13N019
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002212
Manufacturer: Survival Armor

Report Date: 01/07/14
NIJ Armor Type: 3A

Threat 1 - New Armor
Ammunition: .357 SIG 125/FMJ
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1			Size: C-5					Sample 2			Size: C-5				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1490	0	28.08		1480	0	29.82		1464	0	29.86		1476	0	27.35	
2	1462	0	33.02		1462	0	30.45		1462	0	29.01		1450	0	27.95	
3	1470	0	30.17		1461	0	29.33		1475	0	33.36		1479	0	29.5	
4	1468	0			1482	0			1488	0			1465	0		
5	1477	0			1474	0			1481	0			1477	0		
6	1441	0			1453	0			1449	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 29.83 mm
St. Dev: 1.83195 mm

	Sample 3			Size: C-1					Sample 4			Size: C-1				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1470	0	28.07		1482	0	30.17		1473	0	29.25		1473	0	29.13	
2	1471	0	28.5		1467	0	27.57		1495	0	29.46		1486	0	29.35	
3	1448	0	27.76		1449	0	30.39		1458	0	29.21		1473	0	28.72	
4	1459	0			1466	0			1477	0			1455	0		
5	1466	0			1446	0			1461	0			1464	0		
6	1463	0			1475	0			1469	0			1473	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 30.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 28.97 mm
St. Dev: 0.88007 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5				Size: C-5				Sample 6				Size: C-5			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1444	0	37.58		1427	0	39.82		1446	0	44.44		1453	0	36.55	
2	1441	0	39.96		1424	0	41.3		1440	0	36.82		1446	0	36.07	
3	1438	0	39.13		1430	0	39.22		1434	0	38.4		1443	0	38.87	
4	1437	0			1421	0			1442	0			1426	0		
5	1441	0			1425	0			1416	0			1427	0		
6	1446	0			1444	0			1431	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 39.01 mm
Maximum BFS: 44.4 mm k1: 1.568 St. Dev: 2.30166 mm
Pass - BFS within Tolerance Limit Upper Tolerance Limit (80%/95%): 42.6 mm

	Sample 7				Size: C-1				Sample 8				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1416	0	39.41		1431	0	39.36		1421	0	40.85		1437	0	40.39	
2	1418	0	37.95		1450	0	39.1		1436	0	37.23		1426	0	37.71	
3	1431	0	38.7		1422	0	37.8		1431	0	37.17		1444	0	38.86	
4	1444	0			1428	0			1433	0			1422	0		
5	1453	0			1427	0			1429	0			1421	0		
6	1453	0			1432	0			1434	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 38.71 mm
Maximum BFS: 40.8 mm St. Dev: 1.1854 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1448	0	28.24		1405	0	29.4		1412	0	29.54		1424	0	27.75	
2	1417	0	29.85		1435	0	33.74		1410	0	30.46		1418	0	28.48	
3	1425	0	33.74		1411	0	33.5		1427	0	30.97		1427	0	29.67	
4	1417	0			1425	0			1426	0			1431	0		
5	1426	0			1400	0			1429	0			1430	0		
6	1400	0			1413	0			1420	0			1409	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 33.74 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 30.97 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1343	0	34.9		1344	0	36.44		1348	0	39.44		1341	0	35.72	
2	1343	0	39.36		1335	0	42.39		1362	0	38.12		1347	0	38.06	
3	1351	0	39.99		1342	0	42.29		1346	0	42.12		1339	0	37.78	
4	1331	0			1340	0			1344	0			1319	0		
5	1331	0			1335	0			1345	0			1326	0		
6	1340	0			1344	0			1340	0			1342	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 42.39 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 42.12 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: 44.4 mm **Maximum Upper Tolerance Limit (80% probability with 95% confidence): 42.6 mm**
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item b.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1456	0		1472	0	
2	1577	0		1570	0	
3	1667	0		1682	0	
4	1721	0		1770	0	
5	1807	0		1861	1	
6	1886	1		1780	0	
7	1851	1		1841	1	
8	1758	0		1785	0	
9	1802	0		1850	0	
10	1858	0		1878	0	
11	1833	0		1942	1	
12	1949	0		1877	1	
13						
14						
15						

Shot Number	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1467	0		1471	0	*Panel tested on 1/4/13 on Range 2
2	1554	0		1599	0	Crawford/Childers/Nguyen
3	1660	0		1666	0	
4	1773	0		1777	0	
5	1874	1		1858	1	
6	1793	0		1805	1	
7	1840	0		1718	0	
8	1881	0		1768	0	
9	1926	0		1779	0	
10	1928	1		1866	0	
11	1911	0		1904	0	
12	1927	0		1906	0	
13						
14						
15						

Shot Number	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1477	0	
2	1581	0	
3	1690	0	
4	1766	0	
5	1814	1	
6	1799	1	
7	1718	0	
8			*No reading due to chronograph error.
9	1763	0	Repeated same charge at new location.
10	1813	0	
11	1839	0	
12	1906	0	
13	1968	0	
14			
15			

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1453	0	*Switched to 14" barrel due to excessive	1446	0	
2	1573	0	chamber pressures.	1575	0	
3	1663	0		1663	0	
4	1746	0		1749	1	
5	1822	0		1656	0	
6	1901	1		1743	0	
7	1838	1		1785	0	
8	1801	0		1813	0	
9	1833	0		1884	1	
10	1904	0		1823	0	
11	1919	1		1881	0	
12	1889	0		1901	0	
13						
14						
15						

Shot Number	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1465	0	
2	1561	0	
3	1676	0	
4	1774	0	
5	1861	0	
6	1959	1	
7	1867	1	
8	1769	0	
9	1853	0	
10	1922	0	
11	1936	1	
12	1908	1	
13			
14			
15			

Shot Number	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1449	0	
2	1591	0	
3	1684	0	
4	1769	0	
5	1832	1	
6	1761	0	
7	1813	0	
8	1894	0	
9	1909	1	
10	1875	0	
11	1923	0	
12	1983	0	
13			
14			
15			

Shot Number	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1452	0	
2	1567	0	
3	1665	0	
4	1753	0	
5	1859	0	
6	1950	1	
7	1863	1	
8	1788	1	
9	1734	0	
10	1757	0	
11	1851	0	
12	1882	0	
13			
14			
15			

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	26	Requires review
Stops (Partial Penetrations):	94	Acceptable
Perforations below 1500 ft/s:	0	Acceptable

Regression Analysis

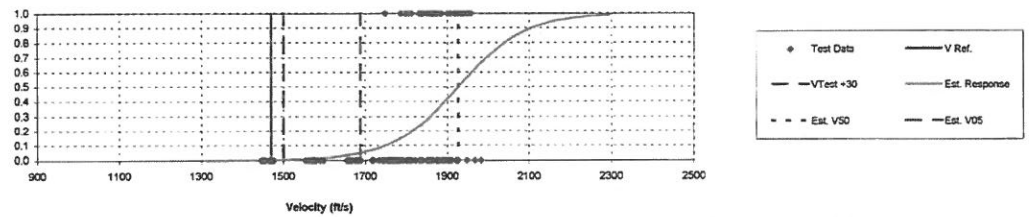
Regression Model: Logistic

Estimated V50: 1927 ft/s

Estimated V05: 514.5 m/s (1688) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.36%** Acceptable

Test Data and Regression Model



Ammunition: 44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1425	0		1425	0		1435	0		1437	0		1430	0	
2	1526	0		1531	0		1521	0		1515	0		1520	0	
3	1629	0		1609	0		1632	0		1615	0		1608	0	
4	1715	0		1707	0		1692	0		1710	0		1717	0	
5	1739	0		1800	1		1746	0		1795	1		1792	1	
6	1820	1		1724	1		1821	1		1709	1		1708	1	
7	1743	1		1634	0		1739	1		1643	0		1633	0	
8	1664	1		1695	0		1665	1		1694	0		1690	0	
9	1573	0		1730	0		1566	0		1743	1		1726	0	
10	1642	0		1799	1		1627	0		1676	0		1779	1	
11	1688	0		1743	1		1701	0		1748	1		1719	1	
12	1746	0		1686	0		1760	0		1697	0		1711	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1455	0		1451	0		1431	0		1450	0		1440	0	
2	1507	0		1518	0		1514	0		1530	0		1519	0	
3	1633	0		1601	0		1625	0		1622	0		1615	0	
4	1687	0		1709	0		1713	0		1701	0		1714	1	
5	1799	0		1803	1		1800	0		1802	0		1630	0	
6	1859	1		1736	1		1879	1		1880	1		1688	0	
7	1802	1		1643	0		1808	1		1796	1		1738	1	
8	1724	1		1692	1		1737	0		1733	0		1690	1	
9	1639	0		1639	0		1762	1		1774	1		1646	0	
10	1679	1		1701	1		1700	1		1719	0		1695	1	
11	1628	0		1640	0		1664	0		1767	0		1646	0	
12	1695	0		1700	0		1725	1		1844	1		1692	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	39	Acceptable
Stops (Partial Penetrations):	81	Acceptable
Perforations below 1460 ft/s:	0	Acceptable

Regression Analysis

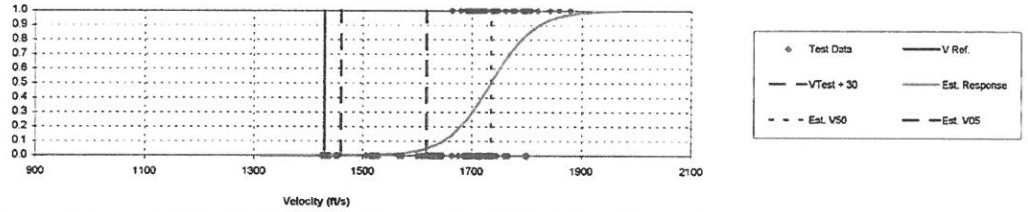
Regression Model: **Logistic**

Estimated V50: 1735 ft/s

Estimated V05: 492.8 m/s (1617) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **0.05%** Acceptable

Test Data and Regression Model



Threat 1 - Conditioned Armor

Ammunition: 357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1405	0		1408	0	
2	1515	0		1547	0	
3	1638	0		1651	0	
4	1736	0		1697	0	
5	1788	1		1800	0	
6	1694	0		1892	0	
7	1776	0		1955	1	
8	1807	1		1891	1	
9	1756	0		1780	0	
10	1833	0		1851	0	
11	1892	1		1874	1	
12	1804	0		1809	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1855 ft/s

Threat 2 - Conditioned Armor

Ammunition: 44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1346	0		1368	0	
2	1447	0		1443	0	
3	1549	1		1519	0	
4	1451	0		1624	0	
5	1510	0		1710	1	
6	1547	0		1656	0	
7	1612	0		1679	0	
8	1675	0		1732	1	
9	1694	0		1687	0	
10	1765	1		1739	1	
11	1704	1		1695	0	
12	1642	0		1721	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1718 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditioned
This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only
Threat 1: 0.36%
Threat 2: 0.05%
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

Mike Amory - 304-925-0305
6601 MacCorkle Ave SE Charleston, WV 25304
WV VEDOR# VC0000010150

Modern Firearms of Chattanooga, LLC

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CRFQ_DPS1500000008

Choice of:
Level II Soft Armor $655.35
Level IIIA Soft Armor $755.35



VERTEX CARRIER
The top-of-the-line in concealable carriers, Survival Armor's Vertex carrier is designed with comfort in mind. The Vertex is available with all of our ballistic packages.

- Super Mini-Rip Stop outer fabric
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- LDSS, patented load distributing strapping system

OPTIONS:

- Tails, Hard or Soft plate inserts
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Comes With:
TWO Vertex Carriers
5x8 Soft Trauma Pac
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100% Woman Owned Small Business (031014-02)
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Mike Amory - 304-925-0305
6601 MacCorkle Ave SE Charleston, WV 25304
WV VEDOR# VC0000010150

Modern Firearms of Chattanooga, LLC

ADDITIONAL ITEMS:

OC or DHS TACTICAL CARRIER	$145.00 EACH
VERTEX CARRIER	$95.00 EACH
GUNSHOT MEDICAL KIT	$95.00 EACH

*These prices, unless directly stated that they cannot be by the State of West Virginia, will be offered to all Law Enforcement agencies, Fire, EMS and government agencies in the state of West Virginia.

Some of the Agencies using Survival Armor:

Department of Homeland Security, Department of State, Lexington Metro PD (females), Lansing PD, Columbus PD, Franklin Co SO, Hilliard PD, Westerville PD, Upper Arlington PD, Grandview Heights PD, Dublin PD, Perry Twp PD, Gahanna PD, Hocking Co SO, Ohio Univ PD, Athens Co SO, Dayton PD, Dayton Airport PD, Springfield PD, Huber Heights PD, Cincinnati PD, Hamilton Co SO, Mason PD, Delhi Twp PD, Marion Co SO, Delaware PD, Richland Co SO, Canton Fire, North Canton PD, Akron PD, Cuyahoga Falls PD, Richfield PD, Stark Co SO, Ohio State Highway Patrol

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

October 8, 2014

Ken Mueller
Director of Operations / R&D
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-FEM-IIIA
NIJ Compliance Status Expires: October 8, 2019

Dear Mr. Mueller:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

All compliance requirements, as identified by the *NIJ Body Armor Compliance Testing Program Administrative Manual* and the *Ballistic Body Armor Applicant Package*, must be maintained as long as the NIJ Statement of Compliance is displayed on this armor model's labels. If, at any time, the compliance status of this armor model is changed, the NIJ Statement of Compliance shall cease to be used as of the date of the status change.

Sincerely,

Michael K. O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

February 25, 2014

Ken Mueller
Director of Operations / R&D
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-IIIA
NIJ Compliance Status Expires: February 25, 2019

Dear Mr. Mueller:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

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Sincerely,

Michael K. O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 60 — 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

Manufacturer: Survival Armor, Inc.

NIJ Armor Type: 2

Threat 1 - New Armor
Ammunition: 9mm 124/FMJ
Test Velocity: 1305 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1278	0		1288	0		1332	0		1288	0		1313	0	
2	1405	0		1432	0		1460	0		1405	0		1390	0	
3	1531	0		1530	0		1516	0		1527	0		1536	0	
4	1614	0		1635	0		1641	0		1598	0		1617	0	
5	1709	1		1734	1		1723	1		1735	1		1726	1	
6	1641	1		1635	1		1655	0		1651	0		1648	1	
7	1580	0		1553	0		1726	1		1707	0		1578	0	
8	1599	0		1621	0		1655	0		1757	1		1630	0	
9	1671	1		1682	0		1696	0		1682	0		1660	0	
10	1622	0		1745	1		1740	0		1742	0		1698	1	
11	1649	0		1691	1		1788	1		1778	1		1687	1	
12	1737	1		1631	1		1821	1		1748	0		1639	0	
13															
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1291	0		1285	0		1276	0		1299	0		1279	0	
2	1399	0		1412	0		1381	0		1431	0		1396	0	
3	1504	0		1527	0		1522	0		1508	0		1537	0	
4	1632	0		1651	0		1647	0		1644	1		1620	0	
5	1728	0		1729	1		1719	1		1543	0		1700	1	
6	1719	0		1646	0		1670	1		1621	0		1640	0	
7	1876	0		1716	1		1561	0		1663	0		1700	0	
8	1929	1		1635	0		1601	0		1705	0		1745	0	
9	1876	1		1701	0		1720	0		1752	1		1784	1	
10	1850	1		1764	1		1729	0		1700	0		1733	1	
11	1780	0		1681	1		1784	1		1771	0		1703	0	
12	1822	0		1653	0		1745	0		1707	0		1742	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	35	Acceptable
Stops (Partial Penetrations)	85	Acceptable

Perforations below 1335 ft/s: 0 Acceptable

Regression Analysis

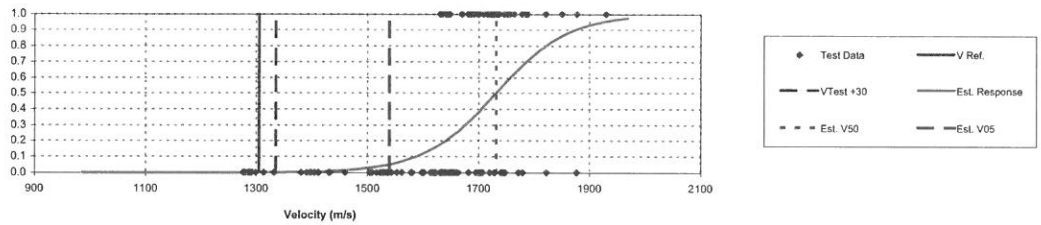
Regression Model: Logistic

Estimated V50: 1731 ft/s

Estimated V05: 469.2 m/s (1539) ft/s

Probability of perforation at NIJ reference velocity (1305 ft/sec): **0.14%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 60 — 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

Manufacturer: Survival Armor, Inc.

NIJ Armor Type: 2

Ammunition: .357 Mag 158/JSP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1434	0		1430	0		1459	0		1448	0		1420	0	
2	1509	0		1505	1		1526	0		1527	0		1502	0	
3	1610	0		1445	0		1592	0		1601	0		1602	0	
4	1671	1		1510	0		1682	1		1690	1		1683	0	
5	1628	1		1545	0		1645	1		1632	1		1730	1	
6	1564	0		1585	1		1591	0		1598	0		1711	1	
7	1628	1		1557	0		1622	1		1614	0		1656	1	
8	1571	0		1581	0		1573	0		1651	1		1602	0	
9	1604	0		1636	0		1622	0		1627	0		1638	0	
10	1645	0		1674	1		1660	1		1665	1		1666	1	
11	1705	1		1650	1		1594	1		1616	0		1630	1	
12	1666	1		1574	0		1568	1		1659	0		1604	1	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1404	0		1413	0		1430	0		1444	0		1414	0	
2	1527	0		1531	0		1528	1		1527	0		1525	0	
3	1597	1		1613	0		1413	0		1624	0		1620	1	
4	1554	0		1705	0		1482	0		1698	1		1572	0	
5	1599	0		1743	0		1554	0		1649	1		1582	1	
6	1652	0		1708	1		1586	0		1571	0		1554	0	
7	1684	1		1766	1		1638	1		1611	0		1588	0	
8	1638	1		1729	1		1554	0		1667	1		1636	0	
9	1595	0		1700	0		1642	0		1622	1		1661	0	
10	1631	1		1720	1		1669	0		1549	0		1716	0	
11	1584	0		1682	1		1717	1		1639	0		1746	1	
12	1642	0		1626	1		1667	1		1646	1		1717	1	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	48	Acceptable
Stops (Partial Penetrations):	72	Acceptable

Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis

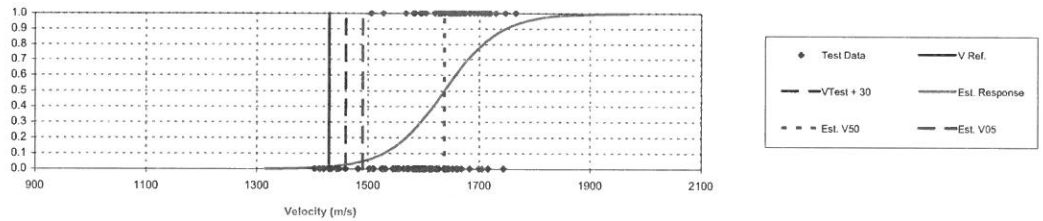
Regression Model: **Logistic**

Estimated V50: 1637 ft/s

Estimated V05: 454.1 m/s (1490) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **1.57%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 60 — 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

Manufacturer: Survival Armor, Inc.

NIJ Armor Type: 2

Threat 1 - Conditioned Armor

Ammunition: 9mm 124/FMJ
Test Velocity: 1245 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1256	0		1274	0	
2	1399	0		1374	0	
3	1481	0		1453	0	
4	1599	1		1529	0	
5	1509	0		1621	1	
6	1531	0		1528	0	
7	1563	0		1573	0	
8	1646	0		1577	0	
9	1639	0		1636	0	
10	1711	1		1684	0	
11	1669	1		1724	1	
12	1637	1		1671	1	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	7	
Stops (PP):	17	
Perforations below 1275 ft/s:	0	Acceptable

Estimated V50: 1641 ft/s

Threat 2 - Conditioned Armor

Ammunition: .357 Mag 158/JSP
Test Velocity: 1340 ± 30 ft/s **Cond:** Conditioned

Shot Num	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1319	0		1359	0	
2	1442	0		1420	0	
3	1524	0		1560	1	
4	1624	1		1490	0	
5	1573	0		1536	0	
6	1630	1		1608	1	
7	1541	0		1563	1	
8	1630	1		1501	0	
9	1562	0		1572	0	
10	1614	1		1605	0	
11	1575	0		1653	1	
12	1588	0		1594	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	8	
Stops (PP):	16	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1593 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditione
This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only
Threat 1: 0.14%
Threat 2: 1.57%
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Report Date: 09/25/12
NIJ Armor Type: 2

Threat 1 - New Armor
Ammunition: 9mm 124/FMJ
Test Velocity: 1305 ± 30 ft/s
Conditioning: New

	Sample 1 Size: C-5								Sample 2 Size: C-5							
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1338	0	31.1		1311	0	30.42		1309	0	29.18		1322	0	28.04	
2	1313	0	27.48		1320	0	33.95		1304	0	28.57		1315	0	31.09	
3	1309	0	29.7		1307	0	38.28		1317	0	25.2		1300	0	33.86	
4	1311	0		g	1314	0			1330	0		g	1316	0		
5	1308	0		g	1324	0			1300	0		g	1316	0		
6	1313	0			1328	0			1294	0			1286	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 30.57 mm
Maximum BFS: 38.3 mm St. Dev: 3.48687 mm
Pass - No BFS greater than 44 mm

	Sample 3 Size: C-1								Sample 4 Size: C-1							
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1286	0	35.74		1310	0	33.6		1316	0	35.53		1313	0	33.75	
2	1329	0	39.76		1320	0	32.15		1324	0	36.9		1302	0	32.01	
3	1324	0	35.84		1312	0	32.13		1303	0	36.88		1328	0	34.92	
4	1309	0		g	1296	0			1283	0		g	1302	0		
5	1353	0			1312	0			1311	0			1304	0		
6	1350	0			1319	0			1307	0			1301	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 34.93 mm
Maximum BFS: 39.8 mm St. Dev: 2.33769 mm
Pass - No BFS greater than 44 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Report Date: 09/25/12
NIJ Armor Type: 2

Ammunition: .357 Mag 158/JSP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

	Sample 5				Size: C-5				Sample 6				Size: C-5			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1446	0	34.16		1418	0	36.27		1430	0	35.94		1427	0	30.45	
2	1444	0	33.81		1445	0	35.62		1444	0	34.24		1429	0	35.17	
3	1444	0	36.14		1438	0	36.18		1424	0	31.41		1433	0	32.66	
4	1443	0			1428	0			1432	0		g	1439	0		
5	1442	0		g	1432	0			1434	0			1437	0		
6	1432	0			1427	0			1429	0			1441	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 34.34 mm
Maximum BFS: 36.3 mm St. Dev: 1.95635 mm
Pass - No BFS greater than 44 mm

	Sample 7				Size: C-1				Sample 8				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1410	0	39.95		1443	0	38.45		1415	0	38.53		1441	0	37.28	
2	1423	0	41.2		1415	0	33.48		1436	0	37.87		1456	0	36.42	
3	1414	0	39.97		1411	0	35.51		1448	0	40.4		1433	0	36.15	
4	1432	0			1426	0			1452	0			1458	0		
5	1401	0			1424	0			1433	0			1436	0		
6	1423	0			1410	0			1422	0			1440	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 37.93 mm
Maximum BFS: 41.2 mm St. Dev: 2.28034 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Report Date: 09/25/12
NIJ Armor Type: 2

Threat 1 - Conditioned Armor

Ammunition: 9mm 124/FMJ
Test Velocity: 1245 ± 30 ft/s
Conditioning: Conditioned

	Sample 21				Size: C-5				Sample 22				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1256	0	34.38		1268	0	33.62		1242	0	33.79		1246	0	35.1	
2	1238	0	35.1		1237	0	37.2		1262	0	29.96		1256	0	36.66	
3	1252	0	34.68		1269	0	40.01		1253	0	37.38		1270	0	39.6	
4	1236	0		g	1250	0			1240	0		g	1269	0		
5	1245	0		g	1269	0			1284	0			1254	0		
6	1263	0			1272	0			1265	0			1265	0		
7																
8																
Summary:	Perforations: 0 (Pass)								Perforations: 0 (Pass)							
	Maximum BFS: 40.01 mm (no requirement)								Maximum BFS: 39.6 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .357 Mag 158/JSP
Test Velocity: 1340 ± 30 ft/s
Conditioning: Conditioned

	Sample 23				Size: C-5				Sample 24				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1310	0	37.71		1325	0	34.58		1323	0	37.96		1351	0	35.98	
2	1340	0	45.48		1353	0	43.11		1345	0	41.91		1356	0	40.98	
3	1352	0	33.55		1345	0	32.71		1312	0	43.09		1347	0	41.01	
4	1360	0		g	1323	0			1311	0			1325	0		
5	1334	0			1336	0			1344	0			1319	0		
6	1344	0			1341	0			1320	0			1311	0		
7																
8																
Summary:	Perforations: 0 (Pass)								Perforations: 0 (Pass)							
	Maximum BFS: 45.48 mm (no requirement)								Maximum BFS: 43.09 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: 41.2 mm
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

Compliance Test Report revision NIJ0101 2-19 (2012-08-06) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-889

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 3 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

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Chesapeake Testing is an independent testing facility and has no affiliation with United Shield International.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 3 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 2	Proprietary	10.00 x 12.00	0.87	1.04

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- .357-cal., 125-grain SIG gold dot hollow point (GDHP) projectiles.
- 9-mm +P+, 127-grain supreme expansion technology (SXT) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (66.7 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 2	0.0	.357-cal., 125-grain SIG GDHP	1	1399	None	17.2
				2	1395	None	16.3
			9-mm +P+, 127-grain SXT	3	1251	None	13.8
				4	1255	None	14.5

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International
Job No.: 2161-012-1
Test Date: 6/3/2013

Test Panel

Description: Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International

Sample No.: Panel 2

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 66.7 F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 55.8%
Condition: Ambient		Barrel/Gun: CT-3017
		Gunner: Matt Settle
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) .357-cal., 125-grain SIG GDHP	Speer 23918	Accurate No. 2
(2) 9-mm +P+, 127-grain SXT	Winchester RA9TA	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.0 mm, 18.5 mm, 19.5 mm, 19.5 mm, 19.4 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3574	1399	3098	1399	1399	None	17.2	
2	1	3585	1395	3107	1395	1395	None	16.3	
3	2	3995	1252	3465	1251	1251	None	13.8	
4	2	3983	1255	3452	1255	1255	None	14.5	

Remarks:

R3 box temp.: 99.0 F
Block 04 clay temp.: 98.9 F
The plate was impacted with a soft armor panel behind it.
Plate weight: 0.87 lbs, Soft Armor Weight: 1.98 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-815-R1

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 3 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

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Chesapeake Testing is an independent testing facility and has no affiliation with United Shield International.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 3 and 5 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 1	Proprietary	10.00 x 12.00	0.84	1.01

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- .44-mag., 240-grain semi-jacketed hollow point (SJHP) projectiles.
- .357-cal., 125-grain SIG full metal jacketed flat nose (FMJ FN) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (66.9 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 1	0.0	.44-mag., 240-grain SJHP	1	1444	None	32.7
				2	1443	None	30.1
			.357-cal., 125-grain SIG FMJ FN	3	1466	None	14.7
				4	1461	None	13.5

BALLISTIC RESISTANCE TEST

Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International
Job No.: 2161-012-1
Test Date: 6/3/2013

Test Panel

Description: Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International

Sample No.: Panel 1

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 66.9 F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 56.5%
Condition: Ambient		Barrel/Gun: CT-3017
		Gunner: Matt Settle
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) .44-mag., 240-grain SJHP	Speer	Accurate No. 5
(2) .357-cal., 125-grain SIG FMJ FN	Speer 4731	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.3 mm, 18.9 mm, 19.0 mm, 19.7 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3469	1441	2996	1446	1444	None	32.7	
2	1	3470	1441	2997	1446	1443	None	30.1	
3	2	3410	1466	2956	1466	1466	None	14.7	
4	2	3421	1462	2965	1461	1461	None	13.5	

Remarks:

R3 box temp.: 99.0 F
Block 04 clay temp.: 100.7 F
The plate was impacted with a soft armor panel behind it.
Plate weight: 0.84 lbs, Soft Armor Weight: 1.98 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-891

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 5 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

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UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 5 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 4	Proprietary	10.00 x 12.00	0.88	1.06

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- 5.70 x 28-mm 27-grain SS195 lead free hollow point (LFHP) projectiles.
- 5.70 x 28-mm 40-grain Hornady V-Max (Blue Tip) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (65.6 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 4	0.0	5.70 x 28-mm, 27-grain SS195 LFHP	1	2300	None	13.1
				2	2329	None	13.3
			5.70 x 28-mm, 40-grain Hornady V-Max (Blue Tip)	3	2017	None	7.5
				4	2014	None	9.1

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International, LLC
Job No.: 2161-012-1
Test Date: 6/5/2013

Test Panel — **Description:** Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International, LLC — **Sample No.:** Panel 4

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 1
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 65.6 F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 48.7%
Condition: Ambient		Barrel/Gun: CT-3037
		Gunner: Jordan Mears
		Recorder: Keith Crouse

Ammunition

Projectile	Lot No.	Powder
(1) 5.70 x 28-mm, 27-grain SS195 LFHP	FNH USA FNB10A901 -012	Factory load
(2) 5.70 x 28-mm, 40-grain Hornady V-Max (Blue Tip)	FNH USA 0117169088	Factory load

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 19.3 mm, 19.7 mm, 20.3 mm, 18.4 mm, 17.8 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	2172	2302	1886	2297	2300	None	13.1	
2	1	2145	2331	1862	2327	2329	None	13.3	
3	2	2477	2019	2149	2016	2017	None	7.5	
4	2	2482	2015	2153	2013	2014	None	9.1	

Remarks:

R1 box temp.: 99.0 F
Block 05 clay temp.: 97.6 F
Panel impacted with a soft armor panel behind it.
Plate weight: 0.88 lbs, Soft Armor Weight: 2.09 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

.44 panel 4, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	436.0	Held	C	
3	441.8	Held	C	

.44 panel 5, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	437.8	Held	C	
3	437.1	Held	C	

.44 panel 6, 0.558kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	445.1	Held	C	
2	437.5	Held	C	
3	436.4	Held	C	

END OF REPORT

.44 panel 4, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	436.0	Held	C	
3	441.8	Held	C	

.44 panel 5, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	437.8	Held	C	
3	437.1	Held	C	

.44 panel 6, 0.558kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	445.1	Held	C	
2	437.5	Held	C	
3	436.4	Held	C	

END OF REPORT

ANNEX A

RESULTS

9mm panel 1, 0.550kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	437.5	Held	C	
2	441.3	Held	C	
3	437.1	Held	C	

9mm panel 2, 0.791kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	439.0	Held	C	
2	447.9	Held	C	Fast
3	423.7	Held	C	Slow

9mm panel 3, 0.789kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	437.4	Held	C	
2	428.7	Held	C	
3	438.2	Held	C	

SURVIVAL ARMOR®

Survival Armor® Achieves ISO 9001:2008/BA 9000:2012

Press Release

Ft. Myers, Florida, November 14, 2014- Survival Armor President Larry McCraney is pleased to announce that Survival Armor is promoting their dedication to be unparalleled in quality manufacturing by achieving the ISO 9001:2008 / BA 9000:2012 certification. The BA 9000:2012 certification was developed to coincide and reinforce standards required by the National Institute of Justice.

Survival Armor is one of the only ISO 9001:2008/BA 9000:2012 body armor manufacturers in the world to obtain this prestigious certification that strictly focuses on quality assurances when manufacturing body armor. Since the release of the BA 9000:2012 standard Survival Armor has focused on maintaining and improving their efforts to go above and beyond the requirements needed to achieve the BA 9000:2012 certification.

This certification is just another testament to Survival Armor's dedication to protect those who protect us. Their ability and drive to provide their customers with the most innovative and highest quality products possible is their priority. They continue to strive toward excellence by producing the best body armor in the world.

It's All About Survival...

About Survival Armor

Survival Armor® is located in Fort Myers, Florida. Survival Armor has brought together some of the best minds from the US ballistic protection industry combining well over 80 years of experience. Manufacturer of innovating patented concealable and tactical body armor in male and structured female, as well as, transportation protection for law enforcement, military and federal governments. Survival Armor, Inc.'s organization's quality management system is compliant with ISO 9001:2008 / BA 9000:2012.

PERRY JOHNSON REGISTRARS, INC.

ANAB ACCREDITED

12621 Corporate Lakes Drive, Unit 8 – Fort Myers, FL 33913

Phone: 866.868.5001 Fax: 239.210.0898 Web: www.survivalarmor.com

SURVIVAL ARMOR INTEGRATED MEDICAL KIT

The kit contents of the Survival Armor Integrated Medical Kit are designed to give EVERY responding officer the means to effectively deal with the two main causes of preventable combat deaths (penetrating trauma):

- Extremity Hemorrhage
- Tension Pneumothorax

Kit dimensions: 7 3/4 wide x 3 1/4 tall x 1/2" thick
Kit weight including deployment pouch: 7.5 oz

CONTENTS:

Kit 1
(1) SWAT T Tourniquet
(1) wound packing Gauze
(1) duct tape
(2) occlusive dressings
(1) pair nitrile gloves

Kit 2
(1) SWAT T Tourniquet
(1) Quikclot® combat Gauze
(1) duct tape
(2) occlusive dressings
(1) pair nitrile gloves

Kit deploys from integrated deployment pouch out of Vertex6 concealable carrier
- *OR* - from retrofit vertex 6 pouch



SURVIVAL ARMOR®

Technical Specification

Paragon^6

Level IIIA – FEM – NIJ 0101.06 Requirement

Model Number	LW-FEM-IIIA
Ballistic Material	Aramid/Polyethylene
Pad Cover	TPU Coated *Ripstop*
NIJ Level	IIIA
Weight (Areal Density)	1.05 lbs/ft^2
Thinness	.24 inches

V50 357sig	1893 fps
V50 44mag	1762 fps

Certification Backface- 357sig	27.03 mm
Certification Backface- 44mag	35.22 mm

SURVIVAL ARMOR®

Technical Specification

Paragon[6]

Level II – NIJ 0101.06 Requirement

Model Number	LW-II
Ballistic Material	Aramid/Dyneema
Pad Cover	TPU Coated *Ripstop*
NIJ Level	II
Weight (Areal Density)	.77 lbs/ft^2
Thinness	.17 inches

V50 9mm	1629 fps
V50 357mag	1556 fps

Certification Backface- 9 mm	32.48 mm
Certification Backface- 357 mag	32.53 mm

SURVIVAL ARMOR®

Technical Specification

Paragon[6]

Level IIIA – NIJ 0101.06 Requirement

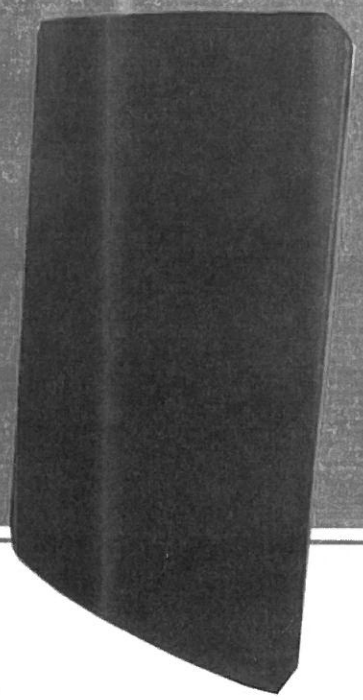
Model Number	LW-IIIA
Ballistic Material	Aramid/Polyethylene
Pad Cover	TPU Coated *Ripstop*
NIJ Level	IIIA
Weight (Areal Density)	1.05 lbs/ft^2
Thinness	.20 inches
V50 357sig	1927 fps
V50 44mag	1735 fps
Certification Backface- 357sig	29.4 mm
Certification Backface- 44mag	38.8 mm

0° dry		Required V50 (fps)	Actual V50 (fps)	% of Required
2 grain RCC		2710	3096	114%
4 grain RCC		2400	2675	111%
16 grain RCC		2050	2254	110%
64 grain RCC		1660	1859	112%
17 grain FSP		1850	2174	118%

United Shield International

SPARTAN PANEL
NIJ Level IIIA Panel

The Spartan panel is a high performance, lightweight and ultra thin panel designed to provide discrete protection against hand guns, knives and explosion. Spartan is rated to NIJ Level IIIA 0108.01 (Ballistic resistant protective materials) which includes 44 magnum and 9mm and all lesser threats. Spartan is constructed from United Shield's advanced proprietary technology and is available curved or flat.





Weight &Thickness

10 x 12 inch plate weighs .96lb (440 grams)
and is 3/16 inch thick (<5mm)

Sizes

10 x 12 inches (25 x 30cm),
9 x 7 inches (23 x 18cm),
8 x 5 inches (20 x 12cm)
Other sizes and bespoke shapes available on request

Applications

Spartan can be used in a variety of different applications including backpacks, clipboards, briefcases, handbags ,trauma armor, Structural armor, upgrade plates etc.

Colors

The standard plate has a black nylon wrap. Other colors and finishes are available on request.

Warranty & Quality Assurance

United Shield International Ltd offers a five year warranty on ballistic performance and is an ISO9001:2008 registered company.

Special threat-tested against the following rounds:

FN 5.7 X 28mm 27-grain SS195 LFHP	FN 5.7 X 28mm 40-grain Hornady V-Max (Blue Tip)
.44 MAG, 240-grain SJHP	.357 SIG 125 grain FMJFN
.357 SIG 125-grain GDHP	9-mm +P+, 127-grain SXT

International
United Shield International Ltd.
56 South Way, Walworth Industrial Estate, Andover,
Hampshire, SP10 5AF, England
Phone: +44 (0)1264 363 606, Fax +44 (0)1264 363 666
Email: sales@unitedshield.com, www.unitedshield.com

North America
United Shield International LLC
1606 Barlow St, Unit 1, Traverse City
MI 49686,USA
Phone: +1 231 933 1179, Fax: +1 231 933 5368
Email: unitedshield.pjb@gmail.com,
www.unitedshield.com

RFQ No. DPS1500000008

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Modern Firearms of Chattanooga, LLC

Authorized Signature: _____ Date: 01/05/2015

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 6 day of January, 2015

My Commission expires April 4th, 2024

AFFIX SEAL HERE

NOTARY PUBLIC _____

NOTARY PUBLIC OFFICIAL SEAL
CARRIE E. SHEPHERD
State of West Virginia
My Commission Expires Apr. 4, 2024
4515 MacCorkle Ave., Charleston, WV 25301

Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Request for Quotation
31 — Public Safety

Proc Folder: 50832

Doc Description: Addendum No. 2 - Responses to vendor questions

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2014-12-18	2015-01-06 13:30:00	CRFQ 0612 DPS1500000008	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number: Modern Firearms 6601 MacCorkle Ave SE Charleston, WV 25304 ~ WV VENDOR#
Mike Amory Phone: 304-925-0305 Cell: 304-932-9232 Fax: 304-925-3648
FFL: 4-55-039-01-6M-02775 / 100% Woman Owned Small Business (031014-02)
CAGE CODE: 726Q6 / DUNS: 005649370 / EIN: 30-0441280 / E-VERIFY NUMBER 761984

01/06/15 12:54:45
West Virginia Purchasing Division

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
(304) 558-2544
tara.l.lyle@wv.gov

Signature X _____ **FEIN #** 30-0441280 **DATE** 01/05/2015

All offers subject to all terms and conditions contained in this solicitation

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Bullet proof vests	100.00000	EA	$572.00	$57,200.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Level II soft armor 2 carriers, trama pac, STP	WVSP II

Extended Description :

Addendum No. 2 - Responses to vendor questions attached. See attached pages. The bid opening remains on 01/06/2015 at 1:30 pm.

The WV Purchasing Division for the agency, WV State Police, is soliciting bids for an open-end contract to provide body armor for the WV State Police, the WV Division of Natural Resources Police and the WV Division of Protective Services (Capitol Police), per the attached specifications.

Level II Body Armor-See attached specifications

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Bullet proof vests	100.00000	EA	$684.00	$68,400.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival ArmorLevel IIIA soft armor 2 carriers, trama pac, STP		WVSP IIIA

Extended Description :

Level IIIA Body Armor-See attached specifications

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Bullet proof vests	100.00000	EA	$67.95	$6,995.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Tactical Outer Carrier SAMPLED	WVSPTC

Extended Description :
Tactical Outer Carrier

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Bullet proof vests	100.00000	EA	$57.95	$5,795.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Concealable Carrier SAMPLED	WVSPCC

Extended Description :
Concealable Carriers

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Bullet proof vests	100.00000	EA	$87.00	$8,700.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	GUN SHOT KIT SAMPLED	WVSPSK

Extended Description :
Gunshot Medical Kit affixed to the Body Armor

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

Some of the Agencies using Survival Armor:
Department of Homeland Security, Department of State, Lexington Metro PD (females), Lansing PD, Columbus PD, Franklin Co SO, Hilliard PD, Westerville PD, Upper Arlington PD, Grandview Heights PD, Dublin PD, Perry Twp PD, Gahanna PD, Hocking Co SO, Ohio Univ PD, Athens Co SO, Dayton PD, Dayton Airport PD, Springfield PD, Huber Heights PD, Cincinnati PD, Hamilton Co SO,Mason PD, Delhi Twp PD, Marion Co SO, Delaware PD, Richland Co SO, Canton Fire, North Canton PD,Akron PD, Cuyahoga Falls PD, Richfield PD, Stark Co SO, Ohio State Highway Patrol

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[ ] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[X] Other

Description of Modification to Solicitation:

1. The body armor must meet or exceed the 2014 FBI body armor (ballistics) protocol. If should provide documentation that armor meets or exceeds the 2014 FBI protocol prior to contract award.

2. The bid opening remains on 01/06/2015 at 1:30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[x]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company


Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[X] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[ ] Other

Description of Modification to Solicitation:

1. Responses to vendor question attached.
2. The bid opening remains on 01/06/2015 at :30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

CRFQ – DPS1500000008
ADDENDUM NO. 2

Questions:

Q1: Is there a color request for the vests?

A1: See Section 3.1.1.1 under the General Design subsection states the following:

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre- approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

Q2: Should the medical bag be full of supplies or empty?

A2: See Section 3.1.1.1 under the Options subsection states the following:

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

Q3: Should the medical bag be permanently affixed or attached using MOLLE or hook and loop?

A3: The retrofit pouch may be attached by velcro.

Other Information:

1. The bid opening remains on 01/06/2015 at 1:30 pm.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[ ]	Addendum No. 1	[ ]	Addendum No. 6
[X]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company

Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.

   ☑ A pre-bid meeting will not be held prior to bid opening.

   ☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

   ☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

   All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

   An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding. Submitted e-mails should have solicitation number in the subject line.

   Question Submission Deadline: 12/17/2014 by 4:00 pm

   Submit Questions to: Tara Lyle
   2019 Washington Street, East
   Charleston, WV 25305
   Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
   Email: Tara.L.Lyle@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. **BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile. The bid delivery address is:

   Department of Administration, Purchasing Division
   2019 Washington Street East
   Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER:
SOLICITATION NO.:
BID OPENING DATE:
BID OPENING TIME:
FAX NUMBER:

In the event that Vendor is responding to a request for proposal, and choses to respond in a manner other than by electronic submission through wvOASIS, the Vendor shall submit one original technical and one original cost proposal plus convenience copies of each to the Purchasing Division at the address shown above. Additionally, if Vendor does not submit its bid through wvOASIS, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

☐ Technical

☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

   Bid Opening Date and Time: 01/06/2015 at 1:30 pm
   Bid Opening Location: Department of Administration, Purchasing Division
   2019 Washington Street East
   Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. **ALTERNATES:** Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. **REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the $125 fee, if applicable.

14. **UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. **PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the

same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. **WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

   2.1. **"Agency"** or **"Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

   2.2. **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

   2.3. **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.

   2.4. **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.

   2.5. **"Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

   2.6. **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

   2.7. **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

   2.8. **"Vendor"** or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☑ **Term Contract**

Initial Contract Term: This Contract becomes effective on award and extends for a period of one (1) year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed 36 months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional _____ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

   ☑ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

   ☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

   ☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

   ☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under $100,000. Personal or business checks are not acceptable.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

☐ **Commercial General Liability Insurance:** In the amount of _____ _____ or more.

☐ **Builders Risk Insurance:** In an amount equal to 100% of the amount of the Contract.

☐

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The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

☑ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. **LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or $5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

11. **LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount of _____ for _____.
This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

12. **ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Award Document, upon receipt.

13. **FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

14. **PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. **TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

16. **CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.

17. **TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

18. **APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

19. **COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable law.

20. **PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx. Vendor shall be responsible for ensuring compliance with

prevailing wage requirements and determining when prevailing wage requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

21. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

22. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.

23. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

24. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

25. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

26. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

27. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

28. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

29. **CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/default.html.

30. **DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code §§ 29B-1-1 et seq. and the competitive bidding laws found West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq.

If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. A legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Additionally, pricing or cost information will not be considered exempt from disclosure and requests to withhold publication of pricing or cost information WILL NOT BE HONORED.

Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

31. **LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

32. **ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

33. **VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

34. **PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

    ☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

35. **VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but

not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing. Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. **INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to an y person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. **PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of $1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.

38. **ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. **CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. **REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

    ☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. **BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

    After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

    The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

    Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. **PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

    a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.

    b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

    c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater.

For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars ($50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

CERTIFICATIONAND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Modern Firearms of Chattanooga, LLC
(Company)

Mike Amory/Operations Manager
(Authorized Signature) (Representative Name, Title)

304-925-0305 / 304-925-3648 / 01/05/2015
(Phone Number) (Fax Number) (Date)

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia State Police, West Virginia Natural Resources Police and the Division of Protective Services (Capitol Police to establish an open-end contract for Level II and Level IIIA Body Armor.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

   2.1 **"Contract Item"** or **"Contract Items"** means the list of items identified in Section 3, Subsection 1 below.

   2.2 **"Pricing Pages"** means the schedule of prices, estimated order quantity, and totals attached hereto as Exhibit A and used to evaluate the RFQ.

   2.3 **"RFQ"** means the official request for quotation published by the Purchasing Division and identified as CRFQ – DPS1500000008.

3. **GENERAL REQUIREMENTS:**

   3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

   3.1.1 Contract Item No. 1 - Level II Body Armor

   3.1.1.1 Level II Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

   Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level II. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should should include a male and female sample, full

product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level II Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

1. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification
6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level II
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level II, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper

positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema, or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
II	.79 lbs. sq. ft.	.19 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be performed in accordance with MIL-STD-662F using NIJ Standard-0101-

06 for Bullet Resistant Body Armor 9mm 124 grain FMJ RN and .357 Magnum 158 grain JSP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.

Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
II	9MM 124 Grain FMJ RN	1305 ft/s +/- 30 ft/s
II	.357 Magnum 158 Grain JSP	1430 ft/s +/- 30 ft/s

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
II	9MM 124 Grain FMJ RN	1305 ft/s +/- 30 ft/s
	.357 Magnum 158 Grain JSP	1430 ft/s +/- 30 ft/s

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of **NIJ Standard**-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
II	9MM 124 Grain FMJ RN	44mm
II	.357 Magnum 158 Grain JSP	44mm

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (I) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7X9 and 5X8 pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V-50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally, the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay-up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one inch (1").

2. The bottom edge of the front ballistic panel shall be within one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

3.1.2 Contract Item No. 2 - Level IIIA Body Armor

3.1.2.1 Level IIIA Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level IIIA. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should include a male and female sample, full product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level IIIA Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

I. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification

6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level IIIA
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level IIIA, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
IIIA	1.05 lbs. sq. ft.	.25 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be

performed in accordance with MIL-STD-662F using NIJ Standard-0101-06 for Bullet Resistant Body Armor .357 Sig 125 grain FMJ FN and .44 Magnum 240 grain SJHP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the new NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V 50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.
Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**1470 ft/s +/- 30 ft/s**
IIIA	**.44 Magnum 240 Grain SJHP**	**1430 ft/s +/- 30 ft/s**

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**1470 ft/s +/- 30 ft/s**
IIIA	**.44 Magnum 240 Grain SJHP**	**1430 ft/s +/- 30 ft/s**

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of NIJ Standard-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
IIIA	.357 Sig 125 Grain FMJ FN	44mm
IIIA	.44 Magnum 240 Grain SJHP	44mm

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers or Velcro integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (1) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or pre-approved equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7"x9" and 5"x8" pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one (1) inch on each side.

2. The bottom edge of the front ballistic panel shall be with one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne or equal fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

National Institute of Justice (NIJ) 0101-06 are attached to this document.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 Pricing Pages: Vendor should complete the Pricing Pages by [completing unit price, extended price and total as well as all vendor information]. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor should type or electronically enter the information into the Pricing Pages to prevent errors in the evaluation.

5. ORDERING AND PAYMENT:

5.1 Ordering: Vendor shall accept orders by regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Any on-line ordering system must have the capability to restrict prices and available items to conform to the Catalog originally submitted with this RFQ. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

5.2 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1 Delivery Time: Vendor shall deliver standard orders within 60 working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3 Delivery Payment/Risk of Loss: Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all

emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

6.4 **Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5 **Return Due to Agency Error**: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7. MISCELLANEOUS:

7.1 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.

7.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

7.3 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

7.4 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Mike Amory
Telephone Number: 304-925-0305
Fax Number: 304-925-3648
Email Address: m2@modernguns.net

Rev. 04/14

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. **Application is made for 2.5% vendor preference for the reason checked:**

___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. **Application is made for 5% vendor preference for the reason checked:**

___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

✓ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**

✓ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Mike Amory **Signed:** _____

Date: 01/05/2015 **Title:** Operations Manager

CERTIFICATE OF LIABILITY INSURANCE 10/26/2014

DATE (MM/DD/YYYY) 1/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies, LLC-1 Kansas City 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED 1359574 JAGENBERG AG, KREFELD SURVIVAL ARMOR INC ATTN: BOBBIE SUE EPRIGHT 12621 CORPORATE LAKES DR UNIT 8 FORT MYERS FL 33913	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : American Guarantee and Liab. Ins. Co. — 26247 INSURER B : Zurich American Insurance NAIC 16535 INSURER C : HDI-Gerling America Insurance Company — 41343 INSURER D : INSURER E : INSURER F :

COVERAGES CERTIFICATE NUMBER: 12662075 REVISION NUMBER: XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	GENERAL LIABILITY [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: [X] POLICY [ ] PRO-JECT [ ] LOC	N	N	GLD10691-06	1/1/2014	1/1/2015	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 50,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ Excluded
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS	N	N	BAP4882809-05	10/26/2013	10/26/2014	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ XXXXXXX $ XXXXXXX $ XXXXXXX
	[ ] UMBRELLA LIAB [ ] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			NOT APPLICABLE			EACH OCCURRENCE AGGREGATE	$ XXXXXXX $ XXXXXXX
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] N/A If yes, describe under DESCRIPTION OF OPERATIONS below		N	WC4882810-05	10/26/2013	10/26/2014	[X] WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES /(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

12662075

THE DE NIJS GROUP
891 GOSFIELD GATE COURT
WESTERVILLE OH 43081

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Ronald J Foster

ACORD 25 (2010/05)

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ACORD

CERTIFICATE OF LIABILITY INSURANCE 10/26/2014

DATE (MM/DD/YYYY) 1/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

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INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : American Guarantee and Liab. Ins. Co.	26247
INSURER B : Zurich American Insurance NAIC 16535	
INSURER C : HDI-Gerling America Insurance Company	41343
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
1359574 JAGENBERG AG, KREFELD
SURVIVAL ARMOR INC
ATTN: BOBBIE SUE EPRIGHT
12621 CORPORATE LAKES DR UNIT 8
FORT MYERS FL 33913

COVERAGES CERTIFICATE NUMBER: 12662075 REVISION NUMBER: XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	GENERAL LIABILITY	N	N	GLD10691-06	1/1/2014	1/1/2015	EACH OCCURRENCE	$ 1,000,000
	[X] COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	[ ] CLAIMS-MADE [X] OCCUR						MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ Excluded
	[X] POLICY [ ] PRO-JECT [ ] LOC							$
A	AUTOMOBILE LIABILITY	N	N	BAP4882809-05	10/26/2013	10/26/2014	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[ ] ANY AUTO						BODILY INJURY (Per person)	$ XXXXXXX
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$ XXXXXXX
	[X] HIRED AUTOS [X] NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$ XXXXXXX
								$ XXXXXXX
	[ ] UMBRELLA LIAB [ ] OCCUR			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	[ ] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ XXXXXXX
	[ ] DED [ ] RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		N	WC4882810-05	10/26/2013	10/26/2014	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [N] N/A (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES /(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

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AUTHORIZED REPRESENTATIVE

Bonnie J. Johnston

ACORD 25 (2010/05)

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U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

September 13, 2012

Larry McCraney
President
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-II
NIJ Compliance Status Expires: September 13, 2017

Dear Mr. McCraney:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

All compliance requirements, as identified by the *NIJ Body Armor Compliance Testing Program Administrative Manual* and the *Ballistic Body Armor Applicant Package*, must be maintained as long as the NIJ Statement of Compliance is displayed on this armor model's labels. If, at any time, the compliance status of this armor model is changed, the NIJ Statement of Compliance shall cease to be used as of the date of the status change.

Sincerely,

Michael K O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

Intertek

Certificate of Registration

This is to certify that the quality management system of

Survival Armor Inc.

Main Site: 12621 Corporate Lakes Drive, Unit 8, Fort Myers, Florida, 33913, USA

has been assessed and registered by Intertek as conforming to the requirements of

ISO 9001:2008

The quality management system is applicable to:

The design, development and manufacturing of body armor.

Intertek Testing Services NA, Inc. – Boxborough, MA, USA

Certificate Number: **QMS-0276b**

Certificate Issue Date: 20 March 2012
Certificate Expiry Date: 20 March 2015

In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed online at www.intertek.com/systems-certification

PERRY JOHNSON REGISTRARS, INC.

Certificate of Registration

Perry Johnson Registrars, Inc., has audited the Quality Management System of:

Survival Armor

12621 Corporate Lakes Drive, Unit 8, Fort Myers, FL 33913 United States

(Hereinafter called the Organization) and hereby declares that Organization is in conformance with:

ISO 9001:2008/BA 9000:2012

This Registration is in respect to the following scope:

Design, Development and Manufacture of Body Armor

This Registration is granted subject to the system rules governing the Registration referred to above, and the Organization hereby covenants with the Assessment body duty to observe and comply with the said rules.

Terry Boboige

Terry Boboige, President

Perry Johnson Registrars, Inc. (PJR)
755 West Big Beaver Road, Suite 1340
Troy, Michigan 48084
(248) 358-3388

PERRY JOHNSON REGISTRARS, INC.

ANAB ACCREDITED

The validity of this certificate is dependent upon ongoing surveillance.

Effective Date:	Expiration Date:	Certificate No.:
October 15, 2014	October 14, 2017	C2014-02575

SURVIVAL ARMOR®

Limited Warranty

Your vest is made up of two elements: (1) the protective panels, containing the ballistic and/or stab-resistant panels in a permanent protective cover and (2) a removable outer carrier. This vest is warranted to be free of defects in material and workmanship for the applicable warranty period, subject to the limitations listed below.

The warranty period for the carrier is 18 months from the date of purchase. The warranty period for the protective panels is 5 years from the date of purchase.

Carrier warranty excludes open seams or broken stitches that occur after delivery. Our warranties extend to the original user or purchaser only. This warranty is voided if the maintenance or care as stated on the protective panels label and enclosed instructions have not been followed or if the product has been altered in any manner by anyone other than Survival Armor. Since a coordinated protective panel and carrier are essential for proper protection, use of a carrier outer shell not produced or approved by Survival armor nullifies the warranty. To qualify for warranty coverage, you must (a) complete and mail the attached warranty card within 30 days of receipt of your vest, (b) if a warranty issue then return the entire vest to the Survival Armor in Ft. Myers at: 13881 Plantation Road, International Unit #8, Fort Myers, FL 33912 Attn: Returns, within the applicable warranty period, and (c) include the vest with carriers with the reasons for returning in writing.

If a warranty claim is made and Survival Armor determines that it is a valid warranty claim, then in its discretion Survival Armor will repair or replace the defective component. This limited warranty does not cover any claim or warranty made by a reseller or anyone else beyond the provisions of the warranty. This warranty is in lieu of all other warranties, express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose, which are expressly disclaimed.

The buyer agrees that its sole and exclusive remedy against Survival Armor will be limited to the repair or replacement of defective parts, provided that the buyer complies with all instructions and directions regarding the vest or its components. No partial or full refund to the purchase price will be provided. This exclusive remedy will not be deemed to have failed of its essential purpose so long as Survival Armor is willing to repair or replace a defective part in any manner that allows the product to be worn and meet the performance criteria for the balance of the warranty period. Survival Armor will not be liable to buyer and disclaims any liability for any incidental, consequential or special damages to the maximum extent permitted by any applicable state law warnings.

Each protective panel label lists the applicable standard to which it was certified. The protective panels were designed to stop the specific threats used in the protocol for this certification. The protective panel only offers protection on the areas it covers, and cannot cover areas it does not cover. The outer carrier offers no ballistic protection. Protective panels only protect when properly inserted into the carrier with the strike face out and the body side against the body. Always insert the protective panels as described in the materials enclosed with your body armor. Proper care of the protective panels and carrier is essential to maintaining the comfort and performance of the vest. Always follow the instructions for care and maintenance that came with the vest.

Survival Armor disclaims liability for consequential damages for breach of any express or implied warranty, including any implied warranty or merchantability and fitness for particular purpose. The laws of your state may impose different requirements.

A member of the VERSEIDAG PROTECTION GROUP

13881 Plantation Road – International Center I, Unit 8 - Fort Myers, FL 33912
Phone: 866.868.5001 Fax: 239.210.0898 Web: www.survivalarmor.com

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems-Wichita Division
Report Identification Number: 14N015
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002340
Manufacturer: Survival Armor

Report Date: 08/29/14
NIJ Armor Type: 3A

Threat 1 - New Armor
Ammunition: .357 SIG 125/FMJ
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1			Size: C-5				Sample 2			Size: C-5			
	Front Panel				Back Panel			Front Panel				Back Panel		
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1476	0	27.42		1480	0	25.55		1474	0	25.71		1483	0	25.28	
2	1464	0	26.38		1457	0	27.31		1498	0	27.48		1472	0	26.48	
3	1469	0	30.03		1469	0	28.67		1495	0	28.17		1509	0	25.93	
4	1480	0		g	1488	0			1492	0		g	1479	0		
5	1455	0		g	1475	0			1470	0		g	1473	0		
6	1474	0			1471	0			1487	0			1504	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: **27.03** mm
Maximum BFS: 30 mm St. Dev: **1.42549** mm
Pass - No BFS greater than 44 mm

	Sample 3			Size: C-1				Sample 4			Size: C-1			
	Front Panel				Back Panel			Front Panel				Back Panel		
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1452	0	25.34		1476	0	27.24		1477	0	26.95		1472	0	26.64	
2	1491	0	28.59		1500	0	27.88		1480	0	26.94		1472	0	26.46	
3	1466	0	26.73		1493	0	28.96		1475	0	28.14		1469	0	26.81	
4	1478	0		g	1478	0			1480	0		g	1473	0		
5	1446	0			1478	0			1479	0			1486	0		
6	1446	0			1480	0			1490	0			1490	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: **27.22** mm
Maximum BFS: 29 mm St. Dev: **1.00881** mm
Pass - No BFS greater than 44 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5				Size: C-5				Sample 6				Size: C-5			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1431	0	35.79		1416	0	35.46		1428	0	36.31		1413	0	36.53	
2	1441	0	32.46		1416	0	34.1		1419	0	35.66		1404	0	34.2	
3	1414	0	36.28		1409	0	34.41		1405	0	35.7		1425	0	35.74	
4	1410	0			1406	0			1422	0			1413	0		
5	1406	0			1410	0			1412	0			1436	0		
6	1418	0			1421	0			1431	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 35.22 mm
Maximum BFS: 36.5 mm St. Dev: 1.19367 mm
Pass - No BFS greater than 44 mm

	Sample 7				Size: C-1				Sample 8				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1426	0	35.82		1409	0	36.47		1431	0	37.75		1421	0	36.49	
2	1431	0	36.3		1407	0	35.22		1405	0	34.53		1428	0	35.12	
3	1404	0	38.07		1426	0	37.42		1422	0	36.41		1431	0	36.43	
4	1406	0		g	1406	0			1443	0			1410	0		
5	1411	0			1413	0			1408	0			1429	0		
6	1403	0			1414	0			1411	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 36.34 mm
Maximum BFS: 38.1 mm St. Dev: 1.0656 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1424	0	26.84		1414	0	26.49		1393	0	29.48					<<Error
2	1407	0	31.69		1397	0	25.29		1409	0	27.55					<<Error
3	1409	0	27.6		1421	0	28.16		1439	0	27.79					<<Error
4	1398	0		g	1412	0			1414	0		g				<<Error
5	1393	0		g	1415	0			1416	0						<<Error
6	1396	0			1433	0			1392	0						<<Error
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 31.69 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 29.48 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1336	0	31.18		1336	0	32.8		1360	0	32.69		1358	0	34.25	
2	1344	0	33.16		1357	0	35.8		1344	0	33.85		1363	0	33.83	
3	1325	0	30.1		1365	0	31.51		1338	0	33.39		1347	0	35	
4	1352	0		g	1362	0			1337	0			1341	0		
5	1340	0		g	1344	0			1354	0			1336	0		
6	1335	0			1351	0			1352	0			1341	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 35.8 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 35 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned

0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only

Maximum BFS: 38.1 mm

This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 12.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a = Too close to edge
b = Too close to prior impact
c = Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1469	0		1458	0		1460	0		1450	0		1458	0	
2	1580	0		1569	0		1559	0		1597	0		1605	0	
3	1695	0		1710	0		1678	0		1668	0		1677	0	
4	1746	0		1749	1		1764	1		1764	0		1744	0	
5	1835	1		1696	0		1688	0		1834	0		1844	1	
6	1760	0		1747	0		1740	0		1908	1		1793	0	
7	1807	0		1782	0		1775	1		1857	0		1814	0	
8	1840	1		1843	1		1738	0		1910	0		1853	1	
9	1805	1		1805	0		1790	0		1952	0		1834	1	
10	1773	0		1837	1		1811	0		1987	0		1777	1	
11	1817	0		1765	0		1882	0		1975	1		1748	0	
12	1865	0		1796	0		1914	0		1960	1		1762	0	
13															
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1478	0		1454	0		1453	0		1468	0		1475	0	
2	1589	0		1592	0		1574	0		1552	0		1575	0	
3	1672	0		1685	0		1682	0		1686	0		1696	0	
4	1760	1		1774	1		1740	1		1757	0		1772	0	
5	1703	0		1697	0		1676	0		1859	1		1828	0	
6	1731	0		1740	0		1720	0		1792	0		1911	0	
7	1779	0		1756	0		1769	0		1804	0		1994	0	
8	1789	1		1802	0		1803	1		1848	1		2038	1	
9	1761	0		1848	0		1764	0		1830	0		1988	0	
10	1813	0		1886	1		1850	0		1860	1		2035	1	
11	1859	0		1841	1		1856	0		1818	1		1989	1	
12	1902	1		1814	0		1886	0		1781	0		1954	1	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	31	Acceptable
Stops (Partial Penetrations):	89	Acceptable
Perforations below 1500 ft/s:	0	Acceptable

Regression Analysis

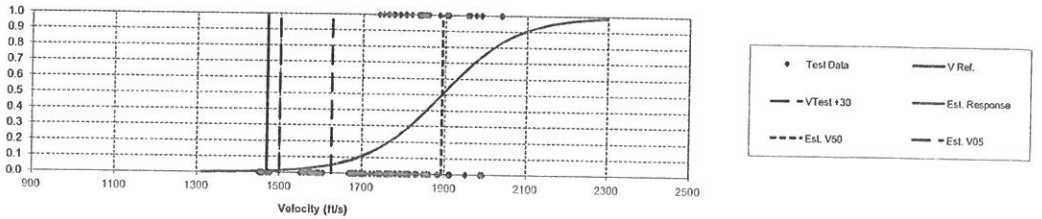
Regression Model: Logistic

Estimated V50: 1893 ft/s

Estimated V05: 495.2 m/s (1625) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): 0.96% Acceptable

Test Data and Regression Model



Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1410	0		1426	0		1423	0		1427	0		1420	0	
2	1516	0		1513	0		1528	0		1510	0		1521	0	
3	1621	0		1606	0		1621	0		1629	0		1628	0	
4	1707	0		1721	1		1715	1		1723	1		1710	1	
5	1788	1		1653	0		1657	0		1809	1		1650	0	
6	1750	1		1685	0		1672	0		1739	0		1687	0	
7	1668	1		1730	1		1736	1		1776	0		1725	1	
8	1615	0		1682	0		1701	1		1817	1		1695	1	
9	1642	0		1724	0		1656	1		1778	0		1650	0	
10	1675	0		1747	1		1638	0		1831	0		1682	1	
11	1702	0		1718	0		1656	0		1845	0		1656	0	
12	1756	1		1760	0		1692	0		1884	1		1688	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1414	0		1435	0		1423	0		1416	0		1418	0	
2	1518	0		1527	0		1553	0		1509	0		1516	0	
3	1624	0		1606	0		1627	0		1619	0		1615	0	
4	1720	1		1709	1		1716	0		1709	0		1733	1	
5	1658	0		1672	0		1799	0		1803	1		1660	0	
6	1689	0		1689	0		1877	1		1750	1		1700	0	
7	1730	0		1729	1		1831	1		1688	1		1725	1	
8	1775	0		1697	1		1778	1		1612	0		1686	1	
9	1785	1		1646	1		1720	0		1626	0		1663	0	
10	1764	0		1623	0		1741	0		1709	0		1690	0	
11	1797	0		1657	0		1791	0		1733	0		1732	0	
12	1827	1		1692	0		1821	0		1770	0		1773	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	35	Acceptable
Stops (Partial Penetrations):	85	Acceptable

Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis

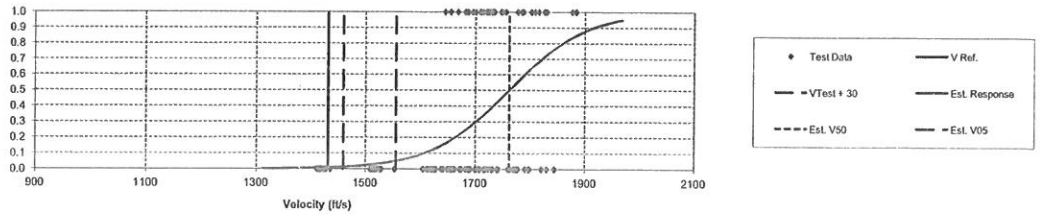
Regression Model: Logistic

Estimated V50: 1762 ft/s

Estimated V05: 473.9 m/s (1555) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): 0.89% Acceptable

Test Data and Regression Model



Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1388	0		1390	0	
2	1492	0		1479	0	
3	1595	0		1628	0	
4	1711	0		1705	0	
5	1805	1		1813	0	
6	1773	0		1940	1	
7	1810	0		1842	1	
8	1837	0		1781	0	
9	1899	1		1813	0	
10	1818	1		1863	0	
11	1803	1		1907	1	
12	1760	0		1853	0	
13						
14						
15						

Summary:

Total Usable Shots: 24 Acceptable
Perforations (CP): 7
Stops (PP): 17

Perforations below 1440 ft/s: 0 Acceptable

Estimated V50: 1843 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1358	0		1349	0	
2	1449	0		1438	0	
3	1501	0		1492	0	
4	1602	0		1602	0	
5	1708	0		1721	0	
6	1808	1		1802	0	
7	1780	0		1882	1	
8	1777	1		1821	1	
9	1777	1		1780	1	
10	1723	1		1715	0	
11	1623	0		1758	0	
12	1687	0		1780	1	
13						
14						
15						

Summary:

Total Usable Shots: 24 Acceptable
Perforations (CP): 8
Stops (PP): 16

Perforations below 1370 ft/s: 0 Acceptable

Estimated V50: 1761 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditioned
This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only
Threat 1: 0.96%
Threat 2: 0.89%
This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 12.0 / Operating System version Windows (32-bit) NT 5.01

Chesapeake TESTING

www.chesapeaketesting.com

30 October 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-124, Tested 22 and 23 October 2014, Purchase Order No. 0008796, Test Report No. CT-RD-14-1232

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 22 and 23 October 2014. This report includes a summary of the test as well as a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jem

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008796
Report No.: CT-RD-14-1232

Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P) and Ballistic Resistance Test: Job No. 2049-124, Tested 22 and 23 October 2014

Prepared by:

Craig A. Thomas
Jordan E. Mears

Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

27 October 2014

Further dissemination only as directed by Survival Armor, October 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

1 Introduction

Survival Armor provided 16 armor samples to Chesapeake Testing for ballistic testing on 22 and 23 October 2014. Prior to testing, the samples were sized and weighed. The results are shown in Table 1.

Table 1. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-124-1	1409295370-Front-Dry	Proprietary	2216-2216	2.53
2049-124-2	1409295370-Back-Dry	Proprietary	2216-2216	2.40
2049-124-3	1409295362-Front-Dry	Proprietary	2216-2216	2.54
2049-124-4	1409295362-Back-Dry	Proprietary	2216-2216	2.42
2049-124-5	1409295371-Front-Hot	Proprietary	2216-2216	2.54
2049-124-6	1409295371-Back-Hot	Proprietary	2216-2216	2.42
2049-124-7	140925365-Front-Tumbled-Hot	Proprietary	2216-2216	2.53
2049-124-8	140925365-Back-Tumbled-Hot	Proprietary	2216-2216	2.42
2049-124-9	1409295368-Front-Cold	Proprietary	2216-2216	2.51
2049-124-10	1409295368-Back-Cold	Proprietary	2216-2216	2.42
2049-124-11	1409295364-Front-Tumbled-Cold	Proprietary	2216-2216	2.59
2049-124-12	1409295364-Back-Tumbled-Cold	Proprietary	2216-2216	2.43
2049-124-13	1409295369-Front-Wet	Proprietary	2216-2216	2.49
2049-124-14	1409295369-Back-Wet	Proprietary	2216-2216	2.41
2049-124-15	1409295363-Front-Tumbled-Wet	Proprietary	2216-2216	2.54
2049-124-16	1409295363-Back-Tumbled-Wet	Proprietary	2216-2216	2.43

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- 9-mm NATO, 124-grain full metal jacketed (FMJ) projectiles.
- 9mm, 127-grain +P+ T-Series projectiles.
- 9-mm, 147-grain gold dot hollow point (GDHP) projectiles.
- .40-cal., 180-grain S&W Speer GDHP projectiles.
- .45 Auto, 230-grain brass jacketed hollow point (BJHP) projectiles.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Some projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount while others were fired from a pistol.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A).

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with FBI Test Protocol Version 4.1, dated 22 May 2014 and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with FBI Test Protocol Version 4.1. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (66 ±2 °F).

The samples were conditioned prior to testing as denoted in the Sample No. and on the data sheets. For each shot, the target was strapped to a gelatin block that was attached to a rigid test fixture. All firings were conducted at 17.200 ft from the target unless otherwise noted. The projectile velocities used for the test were in accordance with the referenced performance standard.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round data sheets for all ballistic resistance testing performed are presented on the following pages.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-1	1409295370-Front-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1422	None
				3	1432	None
				4	1430	None
				5	1425	None
				6	1427	None
				7	1440	None
				8	1431	None
2049-124-2	1409295370-Back-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1436	None
				2	1442	None
				3	1453	None
				4	1446	None
				5	1410	None
				6	1408	None
				7	1410	None
				8	1418	None

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-3	1409295362-Front-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1412	None
				3	1422	None
				4	1410	None
				5	1433	None
				6	1428	None
				7	1426	None
				8	1436	None
2049-124-4	1409295362-Back-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1436	None
				2	1445	None
				3	1437	None
				4	1437	None
				5	1437	None
				6	1432	None
				7	1431	None
				8	1437	None

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-5	1409295371-Front-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1408	None
				2	1422	None
				3	1410	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None
2049-124-6	1409295371-Back-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1417	None
				2	1434	None
				3	1431	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-7	140925365-Front-Tumbled-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1442	None
				2	1430	None
				3	1435	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None
2049-124-8	140925365-Back-Tumbled-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1419	None
				2	1425	None
				3	1429	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-9	1409295368-Front-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1430	None
				3	1419	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-10	1409295368-Back-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1447	None
				2	1437	None
				3	1450	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-11	1409295364-Front-Tumbled-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1449	None
				2	1436	None
				3	1450	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-12	1409295364-Back-Tumbled-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1453	None
				2	1447	None
				3	1431	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-13	1409295369-Front-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1418	None
				2	1417	None
				3	1429	None
2049-124-14	1409295369-Back-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1450	None
				2	1431	None
				3	1445	None
2049-124-15	1409295363-Front-Tumbled-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1444	None
				2	1428	None
				3	1437	None
2049-124-16	1409295363-Back-Tumbled-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1447	None
				3	1449	None

[a] Contact shot; no velocity reading was obtained

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-1
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295370-Front-Dry

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.53 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block		Temp: 66.9 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 56.3%
Condition: Dry	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3511	1424	3043	1424	1424	None	(a)
2	1	3517	1422	3048	1422	1422	None	(a)
3	1	3492	1432	3026	1432	1432	None	(a)
4	1	3496	1430	3030	1430	1430	None	(b)
5	1	3508	1425	3040	1425	1425	None	(b)
6	1	3504	1427	3037	1427	1427	None	(b)
7	1	3473	1440	3009	1440	1440	None	(c)
8	1	3495	1431	3029	1431	1431	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-2
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295370-Back-Dry

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block		Temp: 67.1 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 56%
Condition: Dry	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3482	1436	3018	1436	1436	None	(a)
2	1	3468	1442	3006	1441	1442	None	(a)
3	1	3442	1453	2983	1453	1453	None	(a)
4	1	3458	1446	2997	1446	1446	None	(b)
5	1	3545	1410	3072	1410	1410	None	(b)
6	1	3550	1408	3077	1408	1408	None	(b)
7	1	3547	1410	3074	1410	1410	None	(c)
8	1	3525	1418	3055	1418	1418	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-3
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295362-Front-Dry

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.54 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	67.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	54.8%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 days)/Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3512	1424	3044	1423	1424	None	(a)
2	1	3542	1412	3069	1412	1412	None	(a)
3	1	3516	1422	3047	1422	1422	None	(a)
4	1	3546	1410	3073	1410	1410	None	(b)
5	1	3488	1433	3023	1433	1433	None	(b)
6	1	3503	1427	3035	1428	1428	None	(b)
7	1	3506	1426	3038	1426	1426	None	(c)
8	1	3482	1436	3018	1436	1436	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-4
Test Date: 10/22/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor — **Sample No.:** 1409295362-Back-Dry

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.42 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	66.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	56.1%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 days)/Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3483	1436	3018	1436	1436	None	(a)
2	1	3459	1446	2998	1445	1445	None	(a)
3	1	3480	1437	3016	1437	1437	None	(a)
4	1	3480	1437	3016	1437	1437	None	(b)
5	1	3479	1437	3014	1438	1437	None	(b)
6	1	3492	1432	3026	1432	1432	None	(b)
7	1	3495	1431	3029	1431	1431	None	(c)
8	1	3479	1437	3015	1437	1437	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-5
Test Date: 10/23/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor — **Sample No.:** 1409295371-Front-Hot

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.54 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.5 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.7%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3553	1407	3076	1409	1408	None	(a)
2	1	3517	1422	3045	1423	1422	None	(a)
3	1	3548	1409	3072	1410	1410	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-6
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295371-Back-Hot

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.42 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.9 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 59.7%
Condition: +140 °F for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3531	1416	3057	1417	1417	None	(a)
2	1	3489	1433	3021	1434	1434	None	(a)
3	1	3496	1430	3027	1431	1431	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-7
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 140925365-Front-Tumbled-Hot

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.53 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.2 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Speer KK17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3468	1442	3003	1443	1442	None	(a)
2	1	3499	1429	3029	1431	1430	None	(a)
3	1	3485	1435	3017	1436	1435	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-8
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 140925365-Back-Tumbled-Hot

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.42 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.7 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 60.8%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /+140 for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3526	1418	3052	1420	1419	None	(a)
2	1	3511	1424	3040	1425	1425	None	(a)
3	1	3501	1428	3031	1430	1429	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-9
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295368-Front-Cold

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.51 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.4 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.7%
Condition:	-40 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3512	1424	3041	1425	1424	None	(a)
2	1	3499	1429	3029	1431	1430	None	(a)
3	1	3526	1418	3053	1419	1419	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-10
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295368-Back-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.42 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.9 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.7%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9mm, 127-grain +P+ T-Series	Federal Winchester Ranger 60HB52	Accurate No. 2 Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2993	1448	1447	None	(a)
2	1	3482	1436	3015	1437	1437	None	(a)
3	1	3450	1449	2986	1451	1450	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-11
Test Date: 10/23/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor — **Sample No.:** 1409295364-Front-Tumbled-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.59 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.2 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	54.3%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /-40 F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9mm, 127-grain +P+ T-Series	Federal Winchester Ranger 60HB52	Accurate No. 2 Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3453	1448	2990	1449	1449	None	(a)
2	1	3483	1436	3016	1437	1436	None	(a)
3	1	3449	1450	2986	1451	1450	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-12
Test Date: 10/23/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295364-Back-Tumbled-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.43 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.0 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58.3%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /-40 F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2981	1454	1453	None	(a)
2	1	3458	1446	2994	1447	1447	None	(a)
3	1	3496	1430	3027	1431	1431	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-13
Test Date: 10/23/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor — **Sample No.:** 1409295369-Front-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.49 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.4 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.6%
Condition:	Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3527	1418	3053	1419	1418	None	(a)
2	1	3530	1416	3057	1417	1417	None	(a)
3	1	3501	1428	3031	1430	1429	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-14
Test Date: 10/23/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor — **Sample No.:** 1409295369-Back-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.41 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.7 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 61.3%
Condition: Submerged in water for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3449	1450	2986	1451	1450	None	(a)
2	1	3495	1431	3026	1432	1431	None	(a)
3	1	3461	1445	2997	1446	1445	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-15
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295363-Front-Tumbled-Wet

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.54 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.1%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3464	1443	2999	1445	1444	None	(a)
2	1	3502	1428	3032	1429	1428	None	(a)
3	1	3481	1436	3014	1438	1437	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-16
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295363-Back-Tumbled-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.43 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.2 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 55.3%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) Submerged in water for 14 to 24 hours.		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3513	1423	3041	1425	1424	None	(a)
2	1	3456	1447	2992	1448	1447	None	(a)
3	1	3453	1448	2990	1449	1449	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13079
Test Date: 06/12/13
Customer: Survival Armor

Test Conditions

Temperature: 74 °F.
Humidity: 58 %
Clay Block No.: 8
Clay Temp.: 98.3 °F.
Drop (Avg.): 20.62 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.34 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Front	1.49	Dry	0	1	1	9mm	50 / USM49mm	274.2	2089	27.70
LW-II	Front	1.49	Dry	0	2	2	9mm	50 / USM49mm	279.8	2047	27.70
LW-II	Front	1.49	Dry	0	3	3	9mm	50 / USM49mm	274.2	2089	29.36
LW-II	Front	1.49	Dry	45	4	4	9mm	50 / USM49mm	264.7	2164	No Perforation
LW-II	Front	1.49	Dry	30	5	5	9mm	50 / USM49mm	278.9	2054	No Perforation
LW-II	Front	1.49	Dry	0	6	6	9mm	50 / USM49mm	272.2	2104	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.

Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.0" - 2.75"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Liberty Ammunition Ultra Defense, 9mm+P 50 gr. USM49mm Ultra Fragmentation @ Factory Velocity

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: Paragon
Panel Side: Front
Serial No.: 223484
Lot No.: 6590
Size: 2014
Weight (lbs.): 1.49
DoM: 6/7/2013
Threat Level: II

Sample Description:

No sample description per customer request.

Crawford/Wilson

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13081
Test Date: 06/11/13
Customer: Survival Armor

Test Conditions
Temperature: 73 °F.
Humidity: 48 %
Clay Block No.: 8
Clay Temp.: 98.5 °F.
Drop (Avg.): 20.83 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.34 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Front	1.88	Dry	0	1	1	.45 Cal.	78 / USM45	299.7	1911	30.30
LW-II	Front	1.88	Dry	0	2	2	.45 Cal.	78 / USM45	289.6	1978	30.25
LW-II	Front	1.88	Dry	0	3	3	.45 Cal.	78 / USM45	289.7	1977	30.60
LW-II	Front	1.88	Dry	45	4	4	.45 Cal.	78 / USM45	289.5	1979	No Perforation
LW-II	Front	1.88	Dry	30	5	5	.45 Cal.	78 / USM45	288.7	1984	No Perforation
LW-II	Front	1.88	Dry	0	6	6	.45 Cal.	78 / USM45	290.8	1970	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 3.0" - 3.75"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Liberty Ammunition Ultra Defense, .45 Cal.+P 78 gr. USM45 Ultra Fragmentation @ Factory Velocity

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: Paragon
Panel Side: Front
Serial No.: 223483
Lot No.: 6590
Size: 2216
Weight (lbs.): 1.88
DoM: 6/7/2013
Threat Level: II

Sample Description:
No sample description per customer request.

Crawford/Nguyen

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13080
Test Date: 06/11/13
Customer: Survival Armor

Test Conditions

Temperature:	73	°F.
Humidity:	48	%
Clay Block No.:	6	
Clay Temp.:	98.5	°F.
Drop (Avg.):	19.70	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.34 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.33 ft.
Midpoint to Target:	8.20 ft.
Target to Witness:	0 ft.
Barrel Length:	4 in.
Clay Block:	5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Back	1.57	Dry	0	1	1	.40 S&W	60 / USM40	286.4	2000	27.35
LW-II	Back	1.57	Dry	0	2	2	.40 S&W	60 / USM40	287.5	1992	29.79
LW-II	Back	1.57	Dry	0	3	3	.40 S&W	60 / USM40	287.6	1992	28.84
LW-II	Back	1.57	Dry	45	4	4	.40 S&W	60 / USM40	290.1	1974	No Perforation
LW-II	Back	1.57	Dry	30	5	5	.40 S&W	60 / USM40	288.7	1984	No Perforation
LW-II	Back	1.57	Dry	0	6	6	.40 S&W	60 / USM40	300.3	1907	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.

Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.0" - 2.75"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Liberty Ammunition Ultra Defense, .40 S&W 60 gr. USM40 Ultra Fragmentation @ Factory Velocity

Sample Tested:

Manufacturer:	Survival Armor
Model No.:	LW-II
Model Name:	Paragon
Panel Side:	Back
Serial No.:	223484
Lot No.:	6590
Size:	2014
Weight (lbs.):	1.57
DoM:	6/7/2013
Threat Level:	II

Sample Description:
No sample description per customer request.

Crawford/Nguyen

United States Test Laboratory

Survival Armor Inc.
Mr. Ken Mueller
13881 Plantation Rd.
International Center 1 Unit 8
Fort Meyers, FL 33912

November 20, 2012

Dear Mr. Mueller,

Per your request United States Test Laboratory performed Ballistic Resistance Testing in accordance with Modified/Abbreviated NIJ 0101.06, Special Threat. The testing was performed on model LW –II. The projectiles used for testing are listed below.

The following table represents a summary of the test results. A copy of the ballistic test reports are attached for your inspection.

The test record numbers included in this series of testing are: **SA12024-029**

USTL Report Number	Threat	Highest Velocity (fps)	Lowest Velocity (fps)	Highest BFS (mm)	Lowest BFS (mm)	Perforations
SA12024	9mm 127gr SXT+P+	1318	1241	42.49	30.72	None
SA12025	.357 Sig 125gr TMJ	1383	1325	39.71	34.77	None
SA12026	FN SS-197 5.7x28 40gr V-Max	1736	1706	24.00	20.53	None
SA12027	FN SS-192 5.7x28 28gr JHP	2095	2066	21.77	18.55	None
SA12028	7.62mm 85gr FMJ Tokarev	1546	1515	35.79	31.23	None
SA12029	Speer .357 Sig 125gr GDHP	1370	1342	35.33	32.17	None

The data presented is for the samples tested only; it does not guarantee the performance of other samples of the same or similar product. The test results do not imply endorsement by United States Test Laboratory.

The test samples are being shipped to you via UPS Ground. Should you have any questions, please feel free to call upon us.

Best regards,

Richard Mouser
General Manager

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12024
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 99.6 °F.
Drop (Avg.): 18.3 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208573	2215/2215	1.75	Wet	0	1	1	9mm	127/SXT	438.7	1306	30.72
208573	2215/2215	1.75	Wet	0	2	2	9mm	127/SXT	461.6	1241	42.49
208573	2215/2215	1.75	Wet	0	3	3	9mm	127/SXT	434.7	1318	34.53
208573	2215/2215	1.75	Wet	30	4	4	9mm	127/SXT	454.5	1260	No Perforation
208573	2215/2215	1.75	Wet	45	5	5	9mm	127/SXT	456.6	1254	No Perforation
208573	2215/2215	1.75	Wet	0	6	6	9mm	127/SXT	459.4	1247	No Perforation
										-	
										-	
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										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
9mm 127gr SXT+P+.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208573
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12025
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions

Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 98.4 °F.
Drop (Avg.): 20.4 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208573	2215/2215	1.79	Wet	0	1	1	.357 Sig	125/TMJ	429.0	1335	35.08
208573	2215/2215	1.79	Wet	0	2	2	.357 Sig	125/TMJ	414.1	1383	39.71
208573	2215/2215	1.79	Wet	0	3	3	.357 Sig	125/TMJ	432.2	1325	34.77
208573	2215/2215	1.79	Wet	45	4	4	.357 Sig	125/TMJ	429.8	1333	No Perforation
208573	2215/2215	1.79	Wet	30	5	5	.357 Sig	125/TMJ	428.5	1337	No Perforation
208573	2215/2215	1.79	Wet	0	6	6	.357 Sig	125/TMJ	419.7	1365	No Perforation
										-	
										-	
										-	
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										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

.357Sig 125gr TMJ.
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208573
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:

*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12026
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 97.3 °F.
Drop (Avg.): 20.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.38 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.8 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208572	2215/2215	1.73	Wet	0	1	1	5.7x28	40/V-Max	331.7	1727	20.53
208572	2215/2215	1.73	Wet	0	2	2	5.7x28	40/V-Max	329.9	1736	24.00
208572	2215/2215	1.73	Wet	0	3	3	5.7x28	40/V-Max	335.7	1706	23.10
208572	2215/2215	1.73	Wet	45	4	4	5.7x28	40/V-Max	334.0	1715	No Perforation
208572	2215/2215	1.73	Wet	30	5	5	5.7x28	40/V-Max	333.6	1717	No Perforation
208572	2215/2215	1.73	Wet	0	6	6	5.7x28	40/V-Max	332.2	1724	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
FN SS-197 5.7x28 40gr V-Max
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208572
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12027
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 96.5 °F.
Drop (Avg.): 18.3 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.38 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.8 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208572	2215/2215	1.77	Wet	0	1	1	5.7x28	28/JHP	273.4	2095	19.62
208572	2215/2215	1.77	Wet	0	2	2	5.7x28	28/JHP	274.3	2088	21.77
208572	2215/2215	1.77	Wet	0	3	3	5.7x28	28/JHP	277.2	2066	18.55
208572	2215/2215	1.77	Wet	30	4	4	5.7x28	28/JHP	275.2	2081	No Perforation
208572	2215/2215	1.77	Wet	45	5	5	5.7x28	28/JHP	274.6	2086	No Perforation
208572	2215/2215	1.77	Wet	0	6	6	5.7x28	28/JHP	274.5	2087	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
FN SS-192 5.7x28 28gr JHP
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208572
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12028
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 7
Clay Temp.: 96.8 °F.
Drop (Avg.): 18.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208574	2215/2215	1.74	Wet	0	1	1	7.62x25	85/FMJ	370.8	1545	31.23
208574	2215/2215	1.74	Wet	0	2	2	7.62x25	85/FMJ	375.7	1525	35.79
208574	2215/2215	1.74	Wet	0	3	3	7.62x25	85/FMJ	370.5	1546	35.69
208574	2215/2215	1.74	Wet	30	4	4	7.62x25	85/FMJ	371.7	1541	No Perforation
208574	2215/2215	1.74	Wet	45	5	5	7.62x25	85/FMJ	378.2	1515	No Perforation
208574	2215/2215	1.74	Wet	0	6	6	7.62x25	85/FMJ	373.3	1534	No Perforation
										-	
										-	
										-	
										-	
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										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
7.62mm 85gr FMJ Tokarev.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208574
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12029
Test Date: 11/20/12
Customer: Survival Armor

Test Conditions
Temperature: 72 °F.
Humidity: 50 %
Clay Block No.: 7
Clay Temp.: 95.6 °F.
Drop (Avg.): 19.2 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208574	2215/2215	1.78	Wet	0	1	1	.357 Sig	125/GDHP	426.7	1342	32.17
208574	2215/2215	1.78	Wet	0	2	2	.357 Sig	125/GDHP	422.6	1355	35.25
208574	2215/2215	1.78	Wet	0	3	3	.357 Sig	125/GDHP	422.5	1356	35.33
208574	2215/2215	1.78	Wet	45	4	4	.357 Sig	125/GDHP	423.3	1353	No Perforation
208574	2215/2215	1.78	Wet	30	5	5	.357 Sig	125/GDHP	422.0	1357	No Perforation
208574	2215/2215	1.78	Wet	0	6	6	.357 Sig	125/GDHP	418.1	1370	No Perforation
										-	
										-	
										-	
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										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Speer .357 Sig 125gr. GDHP.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208574
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson

Survival Armor Inc.
Mr. Ken Mueller
12621 Corporate Lakes Dr. Unit 8
Fort Myers, FL 33913

January 4, 2013

Dear Mr. Mueller,

Per your request United States Test Laboratory performed Ballistic Resistance Testing in accordance with Modified/Abbreviated NIJ 0101.06, Special Threat. The testing was performed on model **LW-II**. The projectiles used were Fiocchi 9mm Luger 115gr FMJ, Wolf 9mm Luger 115gr FMJ and Winchester .40 S&W 180gr SXT.

The following table represents a summary of the test results. A copy of the ballistic test reports are attached for your inspection.

The test record numbers included in this series of test are: **SA13001-003**

USTL Report Number	Projectile	Highest Velocity (fps)	Lowest Velocity (fps)	Highest BFS (mm)	Lowest BFS (mm)	Perforations
SA13001	Fiocchi 9mm Luger 115gr FMJ	1229	1161	31.59	25.55	None
SA13002	Wolf 9mm Luger 115gr FMJ	1211	1154	29.09	27.18	None
SA13003	Winchester .40 S&W 180gr SXT	1019	979	27.84	25.03	None

The data presented is for the samples tested only; it does not guarantee the performance of other samples of the same or similar product. The test results do not imply endorsement by United States Test Laboratory.

The test samples are being shipped to you via UPS Ground. Should you have any questions, please feel free to call upon us.

Best regards,

Matt Lutz
Acting Facility Manager

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13001
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions

Temperature: 71 °F.
Humidity: 31 %
Clay Block No.: 9
Clay Temp.: 95.3 °F.
Drop (Avg.): 19.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211439	2216/2216	1.90	Wet	0	1	1	9mm	115 FMJ	465.9	1229	25.55
211439	2216/2216	1.90	Wet	0	2	2	9mm	115 FMJ	471.9	1214	28.44
211439	2216/2216	1.90	Wet	0	3	3	9mm	115 FMJ	479.2	1195	31.59
211439	2216/2216	1.90	Wet	45	4	4	9mm	115 FMJ	491.2	1166	No Perforation
211439	2216/2216	1.90	Wet	30	5	5	9mm	115 FMJ	479.5	1195	No Perforation
211439	2216/2216	1.90	Wet	0	6	6	9mm	115 FMJ	493.2	1161	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Fiocchi 9mm Luger, 115 gr. FMJ.
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Serial No.: 211439
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:

*** PROPRIETARY INFORMATION***
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Landon/Nguyen/Zerger

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13002
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions

Temperature: 73 °F.
Humidity: 30 %
Clay Block No.: 9
Clay Temp.: 93.7 °F.
Drop (Avg.): 18.5 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211439	2216/2216	1.95	Wet	0	1	1	9mm	115 FMJ	477.8	1199	27.18
211439	2216/2216	1.95	Wet	0	2	2	9mm	115 FMJ	492.8	1162	29.09
211439	2216/2216	1.95	Wet	0	3	3	9mm	115 FMJ	496.4	1154	28.74
211439	2216/2216	1.95	Wet	45	4	4	9mm	115 FMJ	482.1	1188	No Perforation
211439	2216/2216	1.95	Wet	30	5	5	9mm	115 FMJ	473.0	1211	No Perforation
211439	2216/2216	1.95	Wet	0	6	6	9mm	115 FMJ	485.6	1180	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Wolf 9mm Luger, 115 gr. FMJ (bimetal jacket).
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Serial No.: 211439
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:

*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Landon/Nguyen/Zerger

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13003
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions

Temperature: 71 °F.
Humidity: 31 %
Clay Block No.: 9
Clay Temp.: 92.8 °F.
Drop (Avg.): 18.8 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211446	2216/2216	1.89	Wet	0	1	1	.40 S&W	180 SXT	584.9	979	25.03
211446	2216/2216	1.89	Wet	0	2	2	.40 S&W	180 SXT	579.6	988	27.05
211446	2216/2216	1.89	Wet	0	3	3	.40 S&W	180 SXT	579.2	989	27.84
211446	2216/2216	1.89	Wet	45	4	4	.40 S&W	180 SXT	563.3	1017	No Perforation
211446	2216/2216	1.89	Wet	30	5	5	.40 S&W	180 SXT	575.3	996	No Perforation
211446	2216/2216	1.89	Wet	0	6	6	.40 S&W	180 SXT	562.3	1019	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 3.00"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Winchester .40 Smith & Wesson, 180 gr. SXT.
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Serial No.: 211446
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:

*** PROPRIETARY INFORMATION***
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Landon/Nguyen/Zerger

Chesapeake TESTING

www.chesapeaketesting.com

15 October 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P), and Ballistic Resistance Test: Job No. 2049-123, Tested 7 and 8 October 2014, Purchase Order No. 0008797, Test Report No. CT-RD-14-1175

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 7 and 8 October 2014. This report includes a summary of the test as well as a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jmt

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008797
Report No.: CT-RD-14-1175

Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P) and Ballistic Resistance Test: Job No. 2049-123, Tested 7 and 8 October 2014

Prepared by:

Craig A. Thomas
Justine M. Tambourine

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

15 October 2014

Further dissemination only as directed by Survival Armor, October 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

1 Introduction

Survival Armor provided eight armor samples to Chesapeake Testing for ballistic testing on 7 and 8 October 2014. This is a two part report. Section 2 is the Protection Ballistic Limit V_{50} BL(P) test report and Section 3 is the ballistic resistance test report. The Areal Density test is presented in Attachment A.

2 Protection Ballistic Limit Test, V_{50} BL(P)

Four armor samples were used for V_{50} testing. Prior to testing, the samples were sized and weighed. The results are shown in Table 1.

Table 1. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-123-1	225329	Proprietary	C-2	1.84
2049-123-2	225328	Proprietary	C-2	1.84
2049-123-3	225327	Proprietary	C-2	1.84
2049-123-4	225326	Proprietary	C-2	1.85

2.1 Threats and Instrumentation

2.1.1 Threats

The threats used for this V_{50} test were 2-, 4-, 16-, and 64-grain right circular cylinder (RCC) projectiles fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.1.2 Instrumentation

Projectile velocity measurements were obtained using a Physics Applications, 3-inch Mag-100, magnetic intervalometer system for the 2- & 4-grain projectiles; and projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs for the 16- & and 64-grain projectiles.

2.2 Details of Test

The objective of this test was to conduct a ballistic limit V_{50} performance test on the armor samples in accordance with DEA Armor Testing Protocol, MIL-STD-662F, and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with MIL-STD-662F. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (68 ±4°F).

SURVIVAL ARMOR PROPRIETARY INFORMATION

For each shot, the target was strapped to a 5.5-in clay backing that was clamped to a rigid test fixture. The projectile velocity for the initial shot against each sample was in accordance with the referenced performance standard. Velocities for subsequent shots were based on the result of the previous shot. The required ballistic limit (BL(P)) for each threat tested is presented in Table 2.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

2.3 Summary of Results

The results of the V_{50} ballistic limit testing are summarized in Table 2. The round-by-round data sheets and scatter plots for all testing performed are provided on the following pages.

The following is a list of abbreviations used in the test data sheets:

C = Complete penetration (same as CP).
Gap = For V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the complete penetration occurs at a higher velocity than the partial penetration.
HP = For V_{50} data, the highest velocity at which a partial penetration occurred.
LC = For V_{50} data, the lowest velocity at which a complete penetration occurred.
P = Partial penetration (same as PP).
ROR = Range of results; for V_{50} data, the difference between the highest and lowest velocities.
V_{50} = Statistical velocity at which the threat defeats the armor 50% of the time.
RMR = Range of mixed results; for V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the partial penetration occurs at a higher velocity than the complete penetration.
True = Round was used in calculating a V_{50} or an approximate V_{50}.
False = Round was not used in calculating a V_{50} or an approximate V_{50}.
NR = No velocity reading was obtained.

SURVIVAL ARMOR PROPRIETARY INFORMATION

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of V_{50} Ballistic Limit Test Results

Job No.	Sample No.	Threat	Target Obliq. (deg)	Required Ballistic Limit (BL(P))	Ballistic Limit Data				
					V_{50} (ft/s)	No. of Points	RMR (ft/s)	GAP (ft/s)	ROR (ft/s)
2049-123-1	225329	2-grain RCC	0.0	2735	2907	6	89	NA	107
2049-123-2	225328	4-grain RCC	0.0	2420	2532	6	NA	20	122
2049-123-3	225327	16-grain RCC	0.0	2080	2105	6	74	NA	74
2049-123-4	225326	64-grain RCC	0.0	1620	1657	6	40	NA	108

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-1
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225329

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2735 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 8.000	Range No.:	1
Witness Panel:	Clay	Primary Vel. Location (ft):	6.500	Temp:	64.4 °F
Obliquity:	0.0°	Range to Target (ft):	10.000	BP:	29.8 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	6.000	RH:	49.5%
Condition:	Ambient			Barrel/Gun:	CDS-0403
				Gunner:	Matt Rixham
				Recorder:	Joe Moore

Ammunition

Projectile	Lot No.	Powder
(1) 2-grain RCC	9132	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.5 mm, 17.3 mm, 19.5 mm, 17.8 mm, 17.2 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	6.2	1006.0	2982	2855	C	True	
2	6.0	1036.3	2895	2771	P	False	
3	6.1	1032.2	2906	2782	P	False	
4	6.2	1007.6	2977	2851	P	True	
5	6.3	1026.4	2923	2798	P	False	
6	6.4	980.0	3061	2932	C	True	
7	6.3	NR	NR	NR	P	False	(a)
8	6.3	990.8	3028	2900	P	True	
9	6.4	976.0	3074	2944	P	True	
10	6.5	971.5	3088	2958	C	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 57
Block temp.: 92.9 °F

Footnotes:
(a) No velocity reading was obtained.

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2907 ft/s
High Partial:	2944 ft/s
Low Complete:	2855 ft/s
Range of Results (ROR):	107 ft/s
Range of Mix Results (RMR):	89 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

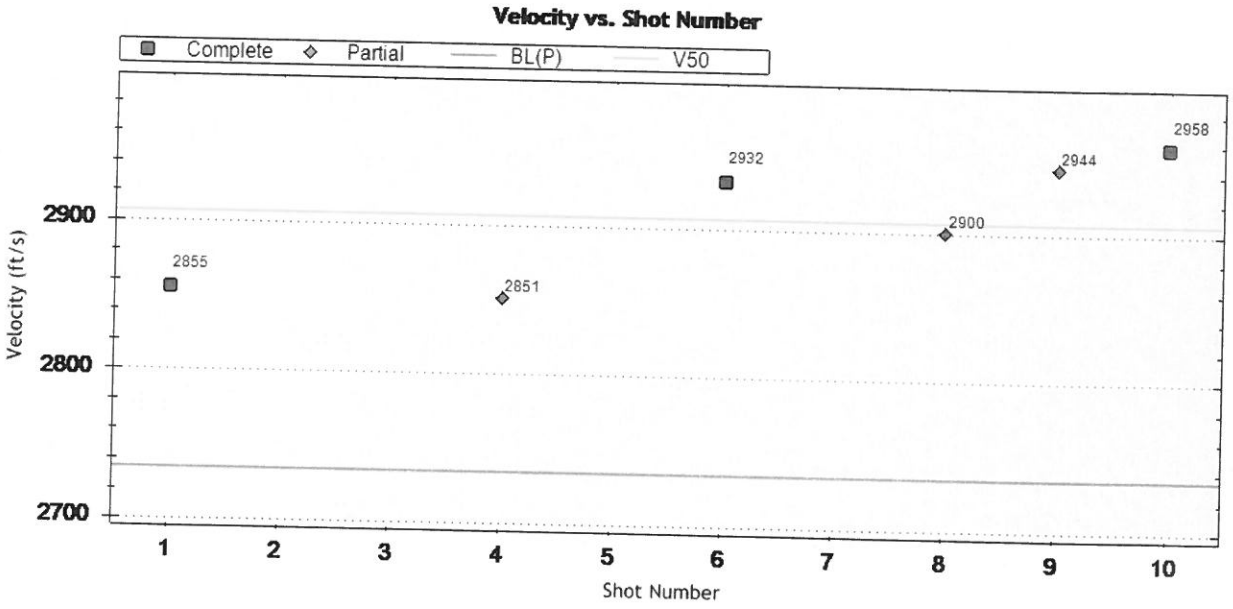
Client: Survival Armor
Job No.: 2049-123-1
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225329

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2907 ft/s
High Partial:	2944 ft/s
Low Complete:	2855 ft/s
Range of Results (ROR):	107 ft/s
Range of Mix Results (RMR):	89 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-2
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225328

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2420 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 8.000	Range No.:	1
Witness Panel:	Clay	Primary Vel. Location (ft):	6.500	Temp:	64.4 °F
Obliquity:	0.0°	Range to Target (ft):	10.000	BP:	29.9 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	6.000	RH:	47.7%
Condition:	Ambient			Barrel/Gun:	CDS-0403
				Gunner:	Matt Rixham
				Recorder:	Joe Moore

Ammunition

Projectile	Lot No.	Powder
(1) 4-grain RCC	9139	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.5 mm, 17.3 mm, 19.5 mm, 17.8 mm, 17.2 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (μs)	Vel. 1 (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	5.3	1118.9	2681	2594	C	True	
2	5.1	1149.3	2610	2525	P	True	
3	5.2	1140.4	2631	2545	C	True	
4	5.0	1155.4	2597	2511	P	True	
5	5.2	1140.1	2631	2545	C	True	
6	5.0	1173.6	2556	2472	P	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 57
Block temp.: 92.9 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2532 ft/s
High Partial:	2525 ft/s
Low Complete:	2545 ft/s
Range of Results (ROR):	122 ft/s
Range of Mix Results (RMR):	NA
Gap:	20 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

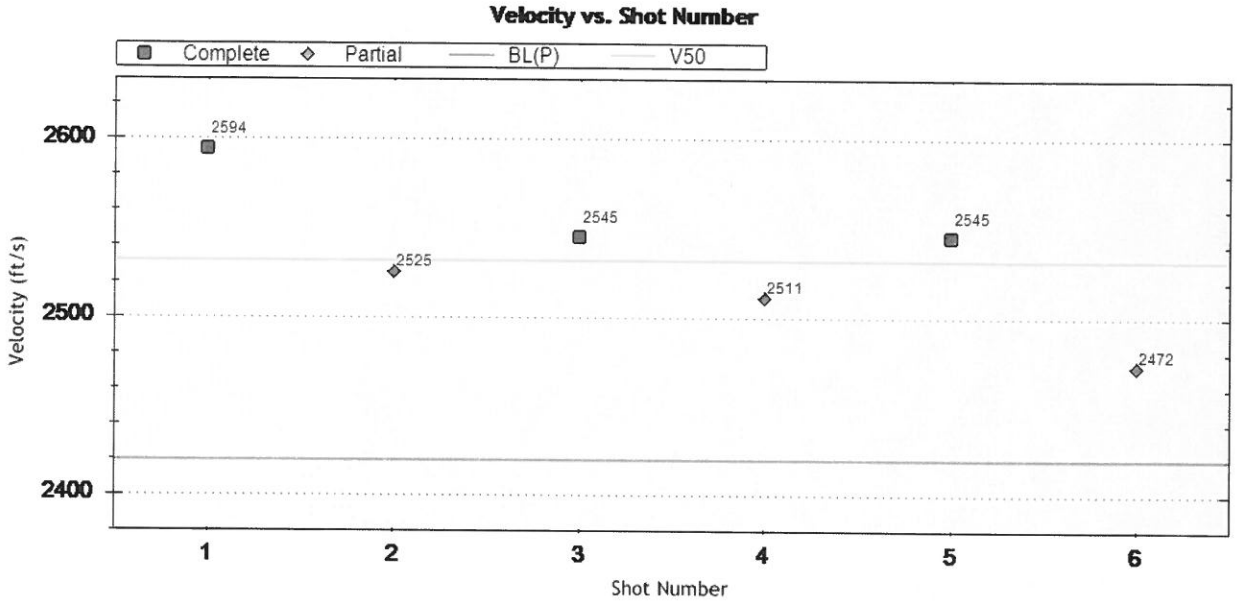
Client: Survival Armor
Job No.: 2049-123-2
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225328

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2532 ft/s
High Partial:	2525 ft/s
Low Complete:	2545 ft/s
Range of Results (ROR):	122 ft/s
Range of Mix Results (RMR):	NA
Gap:	20 ft/s



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-3
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225327

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2080 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 5.333, 9.666, 10.000	Range No.:	7
Witness Panel:	Clay			Temp:	70.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	7.500	BP:	29.97 inHg
Backing Material:	5.5-in clay	Range to Target (ft):	15.000	RH:	41%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CDS-0403
				Gunner:	Sam Swank
				Recorder:	Josh Smith

Ammunition

Projectile	Lot No.	Powder
(1) 16-grain RCC	9189	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.7 mm, 18.8 mm, 17.9 mm, 17.8 mm, 17.6 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	9.0	2153	2322	1862	2327	2325	2209	C	False	
2	8.5	2298	2176	1988	2180	2178	2069	C	True	
3	8.2	2360	2119	2042	2122	2120	2014	P	False	
4	8.4	2316	2159	2002	2164	2162	2054	P	False	
5	8.6	2282	2191	1972	2197	2194	2085	C	True	
6	8.5	2298	2176	1988	2180	2178	2069	P	False	
7	8.6	2266	2207	1961	2210	2208	2098	P	False	
8	8.7	2248	2224	1943	2230	2227	2116	P	True	
9	8.8	2218	2254	1919	2258	2256	2143	P	True	
10	9.0	2158	2317	1865	2323	2320	2204	C	False	
11	8.9	2236	2236	1935	2239	2238	2126	P	True	
12	9.0	2275	2198	1970	2199	2199	2089	C	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 58
Block temp.: 98.4 °F, 96.8 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2105 ft/s
High Partial:	2143 ft/s
Low Complete:	2069 ft/s
Range of Results (ROR):	74 ft/s
Range of Mix Results (RMR):	74 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

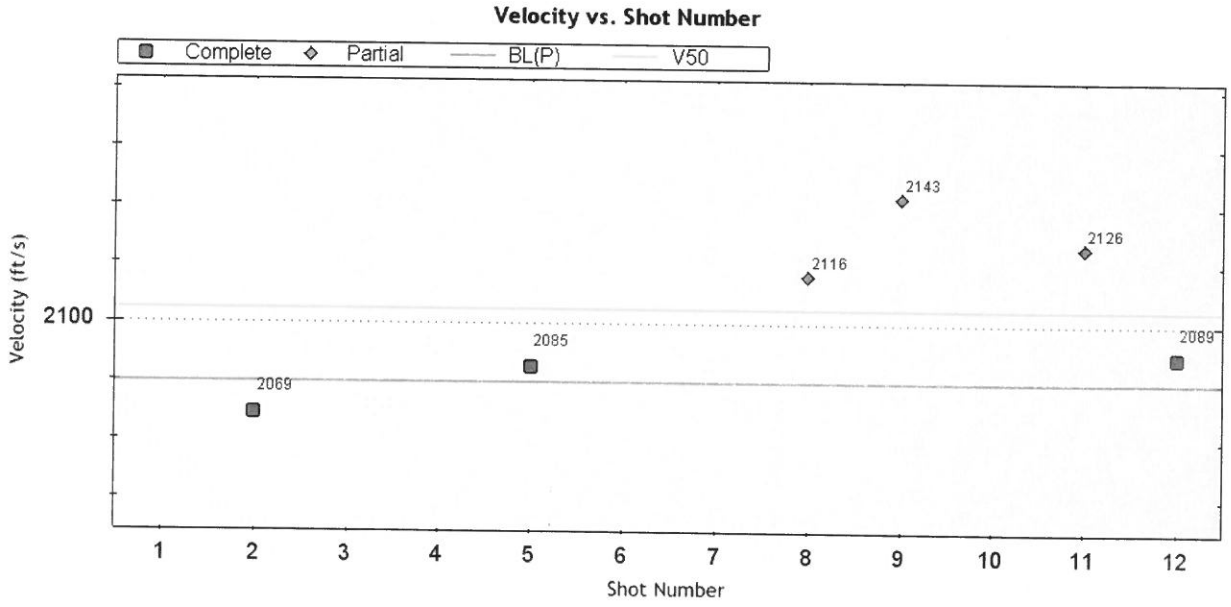
Client: Survival Armor
Job No.: 2049-123-3
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225327

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2105 ft/s
High Partial:	2143 ft/s
Low Complete:	2069 ft/s
Range of Results (ROR):	74 ft/s
Range of Mix Results (RMR):	74 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-4
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225326

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.85 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	1620 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 5.333, 9.666, 10.000	Range No.:	7
Witness Panel:	Clay	Primary Vel. Location (ft):	7.500	Temp:	70.7 °F
Obliquity:	0.0°	Range to Target (ft):	15.000	BP:	29.97 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	0.000	RH:	40%
Condition:	Ambient			Barrel/Gun:	CDS-0600
				Gunner:	Sam Swank
				Recorder:	Josh Smith

Ammunition

Projectile	Lot No.	Powder
(1) 64-grain RCC	9166	IMR 4350

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.4 mm, 18.0 mm, 19.0 mm, 17.5 mm, 17.1 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	100.0	2839	1761	2458	1763	1762	1710	C	False	
2	96.0	2873	1740	2487	1742	1741	1690	P	True	
3	98.0	2788	1793	2406	1801	1797	1744	C	False	
4	96.0	2921	1712	2529	1713	1713	1662	C	True	
5	94.0	2848	1756	2456	1764	1760	1708	C	True	
6	92.0	2944	1698	2548	1701	1699	1650	C	True	
7	89.0	2975	1681	2575	1683	1682	1633	P	True	
8	89.5	3042	1644	2624	1651	1647	1600	P	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 58
Block temp.: 97.6 °F, 96.5 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	1657 ft/s
High Partial:	1690 ft/s
Low Complete:	1650 ft/s
Range of Results (ROR):	108 ft/s
Range of Mix Results (RMR):	40 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

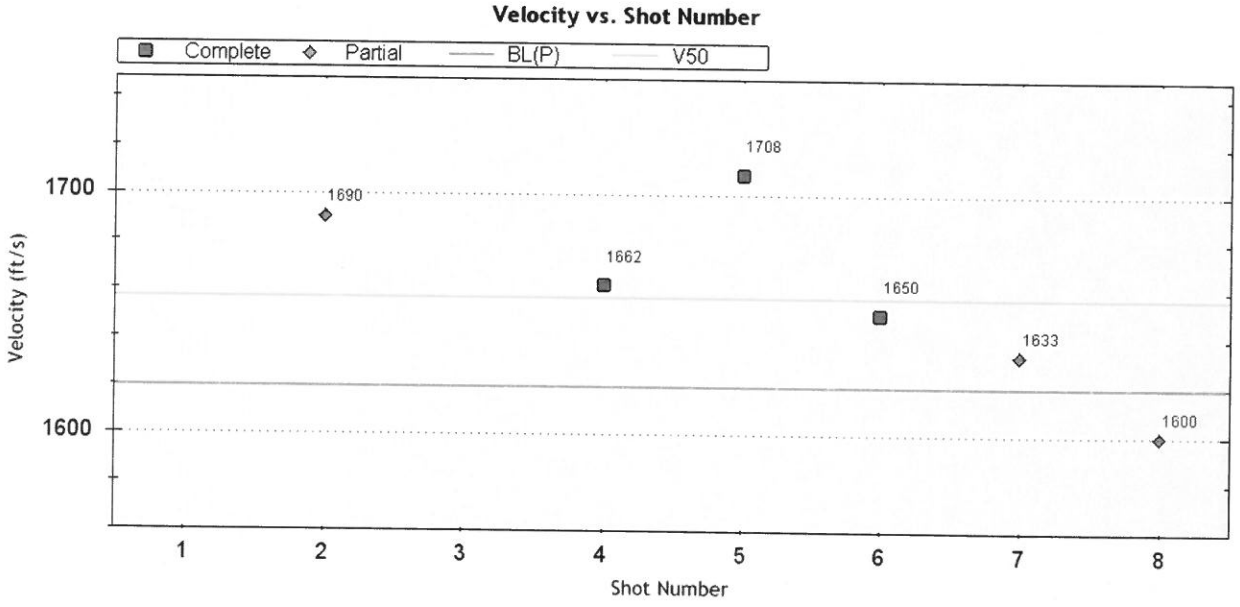
Client: Survival Armor
Job No.: 2049-123-4
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225326

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	1657 ft/s
High Partial:	1690 ft/s
Low Complete:	1650 ft/s
Range of Results (ROR):	108 ft/s
Range of Mix Results (RMR):	40 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

3 Ballistic Resistance Testing

Four armor samples were used for ballistic resistance testing. Prior to testing, the samples were sized and weighed. The results are shown in Table 3.

Table 3. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-123-A	225325	Proprietary	C-2	1.84
2049-123-B	225324	Proprietary	C-2	1.85
2049-123-C	225323	Proprietary	C-2	1.84
2049-123-D	225322	Proprietary	C-2	1.84

3.1 Threats and Instrumentation

3.1.1 Threats

The threats used for this ballistic resistance test were:

- 9-mm NATO, 124-grain full metal jacketed (FMJ) projectiles.
- 9-mm, 127-grain supreme expansion technology (SXT) projectiles.
- .40-cal., 165-grain S&W Speer gold dot hollow point (GDHP) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

3.1.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs. A digital caliper was used to measure the post-impact deformations observed in the backing clay for select shots.

3.2 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with DEA Armor Testing Protocol and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with the referenced performance standard. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (64 ±1 °F).

SURVIVAL ARMOR PROPRIETARY INFORMATION

The sample for Job No. 2049-123-A was tested under ambient conditions. The sample for Job No. 2049-123-B was conditioned at +150 °F (+66 °C); and the sample for Job No. 2049-123-C was conditioned at -20 °F (-29 °C) for no less than 15 to 18 hours prior to testing. The sample for Job No. 2049-123-D was submerged in water for 20 to 25 minutes prior to testing. For each shot, the target was strapped to a 5.5-in clay/plywood backing that was clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

3.3 Summary of Results

The results of the ballistic resistance test are shown in Table 4. The round-by-round data sheets for all ballistic resistance testing performed are presented on the following pages.

SURVIVAL ARMOR PROPRIETARY INFORMATION

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 4. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Threat	Target Obliquity (deg)	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Def. (mm)
2049-123-A	225325	9-mm NATO, 124-grain FMJ	0.0	1	1403	None	29.1
				2	1413	None	24.7
				3	1412	None	25.1
				4	1407	None	NA
				5	1420	None	NA
				6	1423	None	24.8
				7	1408	None	34.6
				8	1432	None	36.0
				9	NR[a]	None	29.2
		.40-cal., 165-grain S&W Speer (GDHP)	0.0	10	NR[a]	None	26.4
		9-mm, 127-grain SXT	0.0	11	NR[a]	None	28.3
2049-123-B	225324	9-mm NATO, 124-grain FMJ	0.0	1	1416	None	24.0
				2	1419	None	23.8
				3	1420	None	23.1
2049-123-C	225323	9-mm NATO, 124-grain FMJ	0.0	1	1412	None	29.3
				2	1413	None	22.9
				3	1416	None	27.4
2049-123-D	225322	9-mm NATO, 124-grain FMJ	0.0	1	1423	None	24.4
				2	1411	None	24.5
				3	1430	None	24.8

[a] Contact shot

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-A
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225325

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	DEA requirements	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Clay			Temp:	64.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	5.5-in clay/plywood	Range to Target (ft):	17.200	RH:	63.6%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory
(3) .40-cal., 165-grain S&W Speer (GDHP)	Speer	Factory

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.5 mm, 19.0 mm, 19.4 mm, 19.0 mm, 18.0 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3564	1403	3088	1403	1403	None	29.1	(a)
2	1	3538	1413	3065	1414	1413	None	24.7	(a)
3	1	3541	1412	3068	1412	1412	None	25.1	(a)
4	1	3554	1407	3080	1407	1407	None	NA	(b)
5	1	3521	1420	3050	1421	1420	None	NA	(b)
6	1	3514	1423	3045	1423	1423	None	24.8	(b)
7	1	3551	1408	3076	1409	1408	None	34.6	(c)
8	1	3491	1432	3025	1432	1432	None	36.0	(c)
9	1	NR	NR	NR	NR	NR	None	29.2	(d, e)
10	3	NR	NR	NR	NR	NR	None	26.4	(d, f)
11	2	NR	NR	NR	NR	NR	None	28.3	(d, g)

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.4 °F

Footnotes:
(a) Dry Test
(b) Multiple round test (no Smoothing)
(c) Edge test
(d) Contact shot
(e) Average velocity: 1420 ft/s
(f) Average velocity: 1131 ft/s
(g) Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-B
Test Date: 10/8/2014

Test Panel — **Description:** Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor — **Sample No.:** 225324

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.85 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	DEA requirements	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Clay			Temp:	64.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	5.5-in clay/plywood	Range to Target (ft):	17.200	RH:	58.9%
Condition:	+150 °F for no less than 15 to 18 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.4 mm, 19.6 mm, 18.7 mm, 18.9 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3530	1416	3059	1416	1416	None	24.0	
2	1	3524	1419	3053	1419	1419	None	23.8	
3	1	3522	1420	3051	1420	1420	None	23.1	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.0 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-C
Test Date: 10/8/2014

Test Panel — **Description:** Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor — **Sample No.:** 225323

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.84 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 64.7 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 60.7%
Condition: -20 °F for no less than 15 to 18 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.4 mm, 19.6 mm, 18.7 mm, 18.9 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3541	1412	3068	1412	1412	None	29.3	
2	1	3539	1413	3066	1413	1413	None	22.9	
3	1	3531	1416	3060	1416	1416	None	27.4	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.0 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-D
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225322

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.84 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 64.7 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 59.9%
Condition: Submerged in water for 20 to 25 minutes		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.0 mm, 18.0 mm, 18.4 mm, 17.3 mm, 17.7 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3513	1423	3044	1423	1423	None	24.4	
2	1	3544	1411	3070	1411	1411	None	24.5	
3	1	3499	1429	3030	1430	1430	None	24.8	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 97.2 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

Chesapeake TESTING

www.chesapeaketesting.com

10 September 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-122, Tested 9 September 2014, Purchase Order No. 0008530, Test Report No. CT-RD-14-1011

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 9 September 2014. This report includes a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jmt

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008530
Report No.: CT-RD-14-1011

Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-122, Tested 9 September 2014

Prepared by:

Craig A. Thomas
Justine M. Tambourine

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

10 September 2014

Further dissemination only as directed by Survival Armor, September 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-1
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263317 Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 59.1%
Condition: Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3507	1426	3035	1428	1427	None	
2	1	3515	1422	3042	1424	1423	None	
3	1	3488	1433	3019	1435	1434	None	
4	1	3500	1429	3028	1431	1430	None	(a)
5	1	3464	1443	2997	1446	1445	None	(a)
6	1	3462	1444	2996	1446	1445	None	(a)
7	1	3431	1457	2969	1459	1458	None	(b)
8	1	3433	1456	2971	1458	1457	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-2
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263317 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 59.7%
Condition: Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3453	1448	2988	1450	1449	None	
2	1	3472	1440	3005	1442	1441	None	
3	1	3479	1437	3010	1440	1438	None	
4	1	3469	1441	3001	1444	1443	None	(a)
5	1	3470	1441	3003	1443	1442	None	(a)
6	1	3474	1439	3007	1441	1440	None	(a)
7	1	3451	1449	2987	1451	1450	None	(b)
8	1	3464	1443	2998	1445	1444	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-3
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263319 Test 1

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.30 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	60%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+WSpeer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Remington	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2992	1448	1447	None	
2	1	3518	1421	3045	1423	1422	None	
3	1	3487	1434	3018	1436	1435	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity: 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-4
Test Date: 9/9/2014

Test Panel Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1408263319 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.1 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.9%
Condition: +140 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+WSpeer (GDHP)	Speer	Accurate No. 2
(4) .45 Auto, 230-grain BJHP	Remington	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3466	1443	2999	1445	1444	None	
2	1	3470	1441	3003	1443	1442	None	
3	1	3483	1436	3013	1438	1437	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity: 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-5
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263316 Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.31 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.1%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3476	1438	3008	1440	1439	None	
2	1	3460	1445	2994	1447	1446	None	
3	1	3455	1447	2990	1449	1448	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-6
Test Date: 9/9/2014

Test Panel | Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1408263316 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 60.8%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3517	1422	3043	1424	1423	None	
2	1	3474	1439	3006	1441	1440	None	
3	1	3488	1433	3018	1436	1435	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-7
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1403263318 Test 3

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.40 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block	Primary Vel. Location (ft):	9.000	Temp:	65.3 °F
Obliquity:	0.0°	Range to Target (ft):	17.200	BP:	30 inHg
Backing Material:	Gelatin block	Target to Witness (in):	0.000	RH:	58.6%
Condition:	Submerged in water for 14 to 24 hours			Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3544	1411	3067	1413	1412	None	
2	1	3497	1430	3026	1432	1431	None	
3	1	3499	1429	3027	1431	1430	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.64 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-8
Test Date: 9/9/2014

Test Panel Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1403263318 Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.28 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.7%
Condition: Submerged in water for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3500	1429	3029	1431	1430	None	
2	1	3458	1446	2993	1448	1447	None	
3	1	3472	1440	3004	1442	1441	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.57 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-9
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263314 Tumbled Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.30 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.8%
Condition: NIJ-STD-0101.06 Section 5 for 12 days/Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3481	1436	3012	1439	1437	None	
2	1	3483	1436	3014	1438	1437	None	
3	1	3508	1425	3036	1427	1426	None	
4	1	3457	1446	2992	1448	1447	None	(a)
5	1	3469	1441	3002	1443	1442	None	(a)
6	1	3451	1449	2986	1451	1450	None	(a)
7	1	3455	1447	2989	1450	1448	None	(b)
8	1	3481	1436	3011	1439	1438	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-10
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263314 Tumble Test 4

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.29 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	60.9%
Condition:	NIJ-STD-0101.06 Section 5 for 12 days/Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3487	1434	3017	1436	1435	None	
2	1	3454	1448	2988	1450	1449	None	
3	1	3449	1450	2985	1452	1451	None	
4	1	3468	1442	3001	1444	1443	None	(a)
5	1	3450	1449	2985	1452	1450	None	(a)
6	1	3457	1446	2992	1448	1447	None	(a)
7	1	3453	1448	2988	1450	1449	None	(b)
8	1	3451	1449	2986	1451	1450	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-11
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263312 Tumbled Test 3

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.31 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.5%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+W Speer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Remington	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3483	1436	3014	1438	1437	None	
2	1	3491	1432	3021	1434	1433	None	
3	1	3449	1450	2985	1452	1451	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-12
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263312 Tumbled Test 4

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.39 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58.2%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+W Speer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Speer	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2979	1455	1453	None	
2	1	3440	1453	2974	1457	1455	None	
3	1	3460	1445	2994	1447	1446	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-13
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263310 Tumbled Test 3

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.29 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.4%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/-40 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2980	1454	1453	None	
2	1	3464	1443	2998	1445	1444	None	
3	1	3524	1419	3049	1421	1420	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-14
Test Date: 9/9/2014

Test Panel — **Description:** Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — **Sample No.:** 1408263310 Tumbled Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.41 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/-40 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9-mm, 127-grain SXT	Federal Winchester Ranger	Accurate No. 2 Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3534	1415	3058	1417	1416	None	
2	1	3524	1419	3049	1421	1420	None	
3	1	3466	1443	2999	1445	1444	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-15
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263313 Tumbled Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.30 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block		Temp: 65.3 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 30 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 60.9%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/Submerged in water for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3495	1431	3025	1432	1432	None	
2	1	3449	1450	2984	1452	1451	None	
3	1	3477	1438	3010	1440	1439	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 3.74 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-16
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263313 Tumbled Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.31 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.2%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2988	1450	1448	None	
2	1	3466	1443	2999	1445	1444	None	
3	1	3440	1453	2977	1455	1454	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.69 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

National Institute of Justice (NIJ)

Approved Test Laboratory
For Personal Body Armor

Expiration Date:
April 30, 2016

National Technical Systems
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone (316) 832-1600 Fax (316) 832-1602
www.nts.com/locations/wichita

NVLAP LAB CODE: 200818-0
Approved Signatory: Matthew Lutz

FLEXIBLE ARMOR: P-BFS TEST

Date Received: 01/30/14
Via: UPS
Returned Via: UPS

Record No.: SA14002
Test Date: 01/30/14
Customer: Survival Armor, Inc.

Test Conditions	Pre	
Temperature:	70	°F.
Humidity:	36	%
Clay Block No.:	9	
Clay Temp.:	98.3	°F.
Drops (Avg.):	19.91	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.42 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.29 ft.
Midpoint to Target:	8.16 ft.
Target to Witness:	0 ft.
Barrel Length:	4 in.
Clay Block:	5.5 in.

Sample Description			Test / Ammunition Description						Chronograph		Results
Model Number	Panel Weight (lbs.)	Panel Size	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-IIIA	1.98	2015-2015	Wet	0	1	1	5.7x28mm	40/Blue Tip	339.4	1688	20.47
LW-IIIA	1.98	2015-2015	Wet	0	2	2	5.7x28mm	40/Blue Tip	331.0	1731	18.65
LW-IIIA	1.98	2015-2015	Wet	0	3	3	5.7x28mm	40/Blue Tip	332.7	1722	20.45
LW-IIIA	1.98	2015-2015	Wet	45	4	4	5.7x28mm	40/Blue Tip	332.0	1725	No Perforation
LW-IIIA	1.98	2015-2015	Wet	30	5	5	5.7x28mm	40/Blue Tip	332.4	1723	No Perforation
LW-IIIA	1.98	2015-2015	Wet	0	6	6	5.7x28mm	40/Blue Tip	334.3	1713	No Perforation
										-	
										-	
										-	
										-	

This test report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST, NIJ or any agency of the Federal Government. This report contains data that are not covered by the NVLAP accreditation. This test was performed in accordance with the specification requirements listed in addition to any customer testing modifications or requests. The test results properly reflect the ballistic performance of the listed sample. This test report shall not be reproduced except in full without written approval of National Technical Systems.

Test Remarks/Notes:

Test Round Used:
FNH 5.7x28 SS 197, 40gr (Blue Tip) @ factory velocity.

Sample Tested:

Manufacturer:	Survival Armor, Inc.
Model No.:	LW-IIIA
Style:	Male
Sample No.:	224526
Size:	2015-2015
Weight (lbs.):	1.98
Threat Level:	IIIA
DoM:	1/24/2014
Panel Side:	Front

Sample Description:
No sample description per customer request.

Project Manager: Nguyen
Range Technician(s): Zerger/Wilson

National Institute of Justice (NIJ)
Approved Test Laboratory
For Personal Body Armor

Expiration Date:
April 30, 2016

National Technical Systems
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone (316) 832-1600 Fax (316) 832-1602
www.nts.com/locations/wichita

NVLAP®
NVLAP LAB CODE: 200818-0
Approved Signatory: Matthew Lutz

Scope of Accreditation for Personal Body Armor Testing:
Effective Dates: 2013-10-1 through 2014-9-30

Record No.: SA14002

NVLAP Code:	Test Method Designation:	Test Method Description
29/A01	NIJ 0101.06, July 2008, Section 7	Ballistic Resistance of Body Armor, Section 7: Ballistic Test Methods
29/A02	NIJ 0101.04, Rev. 2001	Ballistic Resistance of Personal Body Armor
29/B01	NIJ 0101.06, July 2008, Section 5	Ballistic Resistance of Body Armor, Section 5: Flexible Armor Conditioning Protocol
29/B02	NIJ 0101.06, July 2008, Section 6	Ballistic Resistance of Body Armor, Section 6: Hard Armor Conditioning Protocol
29/C01	NIJ 0115.00	Stab Resistance of Personal Body Armor

Test Methods Used:

1) Backing Material Surface Preparation (Section 4.2.5.4): Planar

2) Strapping Method (Section 7.7.2.1): (Figure 13. A) Standard Strapping Arrangement for Smaller Samples:
Two vertical straps and three horizontal straps

3) Shot-to-edge spacing: 2.0 - 2.75" Shot-to-shot spacing: 2.0" minimum

4) Shot locations marked per Section 7.8.1

5) Panel tested according to Section 7.8.2 Armor Submersion.

Customer Specified Testing Instructions:
1.Customer requested threat 1 shot to edge distance.

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems, Wichita Division
Report Identification Number: 13N019
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002212
Manufacturer: Survival Armor

Report Date: 01/07/14
NIJ Armor Type: 3A

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Sample 1 **Size:** C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1490	0	28.08		1480	0	29.82	
2	1462	0	33.02		1462	0	30.45	
3	1470	0	30.17		1461	0	29.33	
4	1468	0			1482	0		
5	1477	0			1474	0		
6	1441	0			1453	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.4 mm
Pass - No BFS greater than 44 mm

Sample 2 **Size:** C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1464	0	29.86		1476	0	27.35	
2	1462	0	29.01		1450	0	27.95	
3	1475	0	33.36		1479	0	29.5	
4	1488	0			1465	0		
5	1481	0			1477	0		
6	1449	0			1450	0		
7								
8								

BFS Statistics: Count: 12
Average: 29.83 mm
St. Dev: 1.83195 mm

Sample 3 **Size:** C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1470	0	28.07		1482	0	30.17	
2	1471	0	28.5		1467	0	27.57	
3	1448	0	27.76		1449	0	30.39	
4	1459	0			1466	0		
5	1466	0			1446	0		
6	1463	0			1475	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 30.4 mm
Pass - No BFS greater than 44 mm

Sample 4 **Size:** C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1473	0	29.25		1473	0	29.13	
2	1495	0	29.46		1486	0	29.35	
3	1458	0	29.21		1473	0	28.72	
4	1477	0			1455	0		
5	1461	0			1464	0		
6	1469	0			1473	0		
7								
8								

BFS Statistics: Count: 12
Average: 28.97 mm
St. Dev: 0.88007 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5			Size: C-5					Sample 6			Size: C-5				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1444	0	37.58		1427	0	39.82		1446	0	44.44		1453	0	36.55	
2	1441	0	39.96		1424	0	41.3		1440	0	36.82		1446	0	36.07	
3	1438	0	39.13		1430	0	39.22		1434	0	38.4		1443	0	38.87	
4	1437	0			1421	0			1442	0			1426	0		
5	1441	0			1425	0			1416	0			1427	0		
6	1446	0			1444	0			1431	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 39.01 mm
Maximum BFS: 44.4 mm k1: 1.568 St. Dev: 2.30166 mm
Pass - BFS within Tolerance Limit Upper Tolerance Limit (80%/95%): 42.6 mm

	Sample 7			Size: C-1					Sample 8			Size: C-1				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1416	0	39.41		1431	0	39.36		1421	0	40.85		1437	0	40.39	
2	1418	0	37.95		1450	0	39.1		1436	0	37.23		1426	0	37.71	
3	1431	0	38.7		1422	0	37.8		1431	0	37.17		1444	0	38.86	
4	1444	0			1428	0			1433	0			1422	0		
5	1453	0			1427	0			1429	0			1421	0		
6	1453	0			1432	0			1434	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 38.71 mm
Maximum BFS: 40.8 mm St. Dev: 1.1854 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1448	0	28.24		1405	0	29.4		1412	0	29.54		1424	0	27.75	
2	1417	0	29.85		1435	0	33.74		1410	0	30.46		1418	0	28.48	
3	1425	0	33.74		1411	0	33.5		1427	0	30.97		1427	0	29.67	
4	1417	0			1425	0			1426	0			1431	0		
5	1426	0			1400	0			1429	0			1430	0		
6	1400	0			1413	0			1420	0			1409	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 33.74 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 30.97 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1343	0	34.9		1344	0	36.44		1348	0	39.44		1341	0	35.72	
2	1343	0	39.36		1335	0	42.39		1362	0	38.12		1347	0	38.06	
3	1351	0	39.99		1342	0	42.29		1346	0	42.12		1339	0	37.78	
4	1331	0			1340	0			1344	0			1319	0		
5	1331	0			1335	0			1345	0			1326	0		
6	1340	0			1344	0			1340	0			1342	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 42.39 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 42.12 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned

0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only

Maximum BFS: **44.4 mm** **Maximum Upper Tolerance Limit (80% probability with 95% confidence):** **42.6 mm**

This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item b.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks (Key to Remarks: a - Too close to edge; b - Too close to prior impact; c - Impact on seam)	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1456	0		1472	0		1467	0		1471	0	*Panel tested on 1/4/13 on Range 2	1477	0	
2	1577	0		1570	0		1554	0		1599	0	Crawford/Childers/Nguyen	1581	0	
3	1667	0		1682	0		1660	0		1666	0		1690	0	
4	1721	0		1770	0		1773	0		1777	0		1766	0	
5	1807	0		1861	1		1874	1		1858	1		1814	1	
6	1886	1		1780	0		1793	0		1805	1		1799	1	
7	1851	1		1841	1		1840	0		1718	0		1718	0	
8	1758	0		1785	0		1881	0		1768	0				*No reading due to chronograph error.
9	1802	0		1850	0		1926	0		1779	0		1763	0	Repeated same charge at new location.
10	1858	0		1878	0		1928	1		1866	0		1813	0	
11	1833	0		1942	1		1911	0		1904	0		1839	0	
12	1949	0		1877	1		1927	0		1906	0		1906	0	
13													1968	0	
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1453	0	*Switched to 14" barrel due to excessive	1446	0		1465	0		1449	0		1452	0	
2	1573	0	chamber pressures.	1575	0		1561	0		1591	0		1567	0	
3	1663	0		1663	0		1676	0		1684	0		1665	0	
4	1746	0		1749	1		1774	0		1769	0		1753	0	
5	1822	0		1656	0		1861	0		1832	1		1859	0	
6	1901	1		1743	0		1959	1		1761	0		1950	1	
7	1838	1		1785	0		1867	1		1813	0		1863	1	
8	1801	0		1813	0		1769	0		1894	0		1788	1	
9	1833	0		1884	1		1853	0		1909	1		1734	0	
10	1904	0		1823	0		1922	0		1875	0		1757	0	
11	1919	1		1881	0		1936	1		1923	0		1851	0	
12	1889	0		1901	0		1908	1		1983	0		1882	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	26	Requires review
Stops (Partial Penetrations)	94	Acceptable
Perforations below 1500 ft/s:	0	Acceptable

Regression Analysis

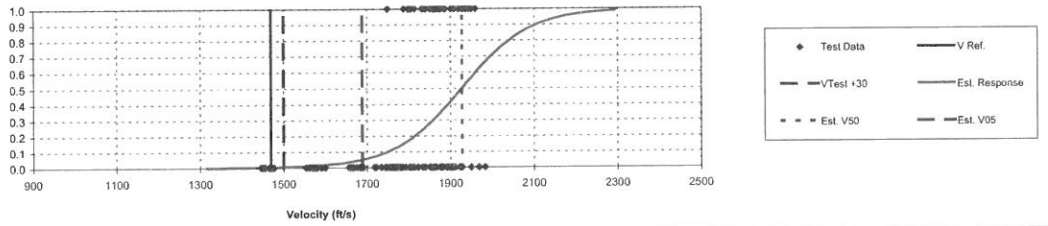
Regression Model: **Logistic**

Estimated V50: 1927 ft/s

Estimated V05: 514.5 m/s (1688) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.36%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1425	0		1425	0		1435	0		1437	0		1430	0	
2	1526	0		1531	0		1521	0		1515	0		1520	0	
3	1629	0		1609	0		1632	0		1615	0		1608	0	
4	1715	0		1707	0		1692	0		1710	0		1717	0	
5	1739	0		1800	1		1746	0		1795	1		1792	1	
6	1820	1		1724	1		1821	1		1709	1		1708	1	
7	1743	1		1634	0		1739	1		1643	0		1633	0	
8	1664	1		1696	0		1665	1		1694	0		1690	0	
9	1573	0		1730	0		1566	0		1743	1		1726	0	
10	1642	0		1799	1		1627	0		1676	0		1779	1	
11	1688	0		1743	1		1701	0		1748	1		1719	1	
12	1746	0		1686	0		1760	0		1697	0		1711	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1455	0		1451	0		1431	0		1450	0		1440	0	
2	1507	0		1518	0		1514	0		1530	0		1519	0	
3	1633	0		1601	0		1625	0		1622	0		1615	0	
4	1687	0		1709	0		1713	0		1701	0		1714	1	
5	1799	0		1803	1		1800	0		1802	0		1630	0	
6	1859	1		1736	1		1879	1		1880	1		1688	0	
7	1802	1		1643	0		1808	1		1796	1		1738	1	
8	1724	1		1692	1		1737	0		1733	0		1690	1	
9	1639	0		1639	0		1762	1		1774	1		1646	0	
10	1679	1		1701	1		1700	1		1719	0		1695	1	
11	1628	0		1640	0		1664	0		1767	0		1646	0	
12	1696	0		1700	0		1725	1		1844	1		1692	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	39	Acceptable
Stops (Partial Penetrations):	81	Acceptable

Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis

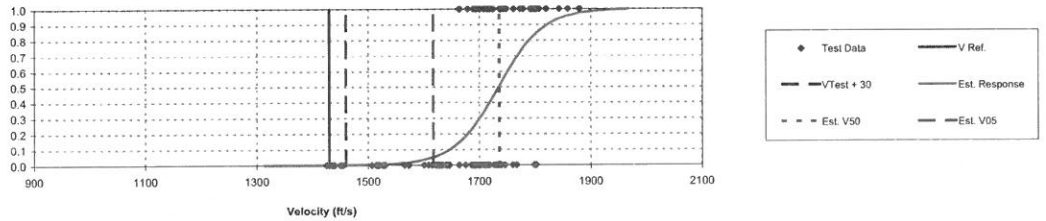
Regression Model: **Logistic**

Estimated V50: 1735 ft/s

Estimated V05: 492.8 m/s (1617) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **0.05%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1406	0		1408	0	
2	1515	0		1547	0	
3	1636	0		1651	0	
4	1736	0		1697	0	
5	1788	1		1800	0	
6	1694	0		1892	0	
7	1776	0		1955	1	
8	1807	1		1891	1	
9	1756	0		1780	0	
10	1833	0		1851	0	
11	1892	1		1874	1	
12	1804	0		1809	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1855 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s **Cond:** Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1346	0		1368	0	
2	1447	0		1443	0	
3	1549	1		1519	0	
4	1451	0		1624	0	
5	1510	0		1710	1	
6	1547	0		1656	0	
7	1612	0		1679	0	
8	1675	0		1732	1	
9	1694	0		1687	0	
10	1765	1		1739	1	
11	1704	1		1695	0	
12	1642	0		1721	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1718 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditione

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only

Threat 1: 0.36%
Threat 2: 0.05%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NTS

www.nts.com

January 8, 2014

Mr. Ken Mueller
Survival Armor Inc.
12621 Corporate Lakes Dr. Unit 8
Fort Myers, FL 33913

Dear Mr. Mueller:

In accordance with your instructions, National Technical Systems, Inc. conducted Ballistic Resistance Testing of body armor submitted by **Survival Armor Test ID # SUR09-002212,** which were received on December 26th and December 31st, 2013. Testing was witnessed by Ken Mueller, a representative of the manufacturer.

The testing, which was authorized by NLECTC, was conducted in accordance with the requirements of NIJ Standard-0101.06, Ballistic Resistance Testing of Police Body Armor, dated July, 2008, and all changes, verbal and written, authorized by NLECTC as of the date of the testing. The results of this test are to be used to determine the compliance of the armor in conjunction with the U. S. Department of Justice's voluntary compliance testing program for armor intended for use by Law Enforcement officers. National Technical Systems, Inc. is not empowered to issue or deny this compliance status; however, the attached data indicates that this sampling of **Test ID # SUR09-002212 did satisfy** the ballistic requirement of NIJ Standard-0101.06 prerequisites to issuance of compliance status for **threat level IIIA** protection.

In addition to the required ballistic test data that has been provided on the official Compliance Test Report (form provided/mandated by NLECTC). The testing included:

Flexible Armor Conditioning Protocol. Conditioned in accordance with Section 5.
Label Permanency and Durability Section 4.1.5.3. Results: PASS

As required, two complete test samples and a copy of this report are being forwarded to NLECTC. The remaining samples will be returned to you via UPS Ground. Please refer to **NTS report number 13N019** for test details.

Sincerely,

Matt Lutz
Division Manager

National Technical Systems, Inc.

7447 W. 33rd Street N., Wichita, KS 67205 Main: 316-832-1600 Fax: 316-832-1602

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems, Wichita Division
Report Identification Number: 13N019
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002212
Manufacturer: Survival Armor

Report Date: 01/07/14
NIJ Armor Type: 3A

Threat 1 - New Armor
Ammunition: .357 SIG 125/FMJ
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1			Size: C-5					Sample 2			Size: C-5				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1490	0	28.08		1480	0	29.82		1464	0	29.86		1476	0	27.35	
2	1462	0	33.02		1462	0	30.45		1462	0	29.01		1450	0	27.95	
3	1470	0	30.17		1461	0	29.33		1475	0	33.36		1479	0	29.5	
4	1468	0			1482	0			1488	0			1465	0		
5	1477	0			1474	0			1481	0			1477	0		
6	1441	0			1453	0			1449	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 29.83 mm
St. Dev: 1.83195 mm

	Sample 3			Size: C-1					Sample 4			Size: C-1				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1470	0	28.07		1482	0	30.17		1473	0	29.25		1473	0	29.13	
2	1471	0	28.5		1467	0	27.57		1495	0	29.46		1486	0	29.35	
3	1448	0	27.76		1449	0	30.39		1458	0	29.21		1473	0	28.72	
4	1459	0			1466	0			1477	0			1455	0		
5	1466	0			1446	0			1461	0			1464	0		
6	1463	0			1475	0			1469	0			1473	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 30.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 28.97 mm
St. Dev: 0.88007 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5				Size: C-5				Sample 6				Size: C-5			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1444	0	37.58		1427	0	39.82		1446	0	44.44		1453	0	36.55	
2	1441	0	39.96		1424	0	41.3		1440	0	36.82		1446	0	36.07	
3	1438	0	39.13		1430	0	39.22		1434	0	38.4		1443	0	38.87	
4	1437	0			1421	0			1442	0			1426	0		
5	1441	0			1425	0			1416	0			1427	0		
6	1446	0			1444	0			1431	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 39.01 mm
Maximum BFS: 44.4 mm k1: 1.568 St. Dev: 2.30166 mm
Pass - BFS within Tolerance Limit Upper Tolerance Limit (80%/95%): 42.6 mm

	Sample 7				Size: C-1				Sample 8				Size: C-1			
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1416	0	39.41		1431	0	39.36		1421	0	40.85		1437	0	40.39	
2	1418	0	37.95		1450	0	39.1		1436	0	37.23		1426	0	37.71	
3	1431	0	38.7		1422	0	37.8		1431	0	37.17		1444	0	38.86	
4	1444	0			1428	0			1433	0			1422	0		
5	1453	0			1427	0			1429	0			1421	0		
6	1453	0			1432	0			1434	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 38.71 mm
Maximum BFS: 40.8 mm St. Dev: 1.1854 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1448	0	28.24		1405	0	29.4		1412	0	29.54		1424	0	27.75	
2	1417	0	29.85		1435	0	33.74		1410	0	30.46		1418	0	28.48	
3	1425	0	33.74		1411	0	33.5		1427	0	30.97		1427	0	29.67	
4	1417	0			1425	0			1426	0			1431	0		
5	1426	0			1400	0			1429	0			1430	0		
6	1400	0			1413	0			1420	0			1409	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 33.74 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 30.97 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1343	0	34.9		1344	0	36.44		1348	0	39.44		1341	0	35.72	
2	1343	0	39.36		1335	0	42.39		1362	0	38.12		1347	0	38.06	
3	1351	0	39.99		1342	0	42.29		1346	0	42.12		1339	0	37.78	
4	1331	0			1340	0			1344	0			1319	0		
5	1331	0			1335	0			1345	0			1326	0		
6	1340	0			1344	0			1340	0			1342	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 42.39 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 42.12 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: 44.4 mm **Maximum Upper Tolerance Limit (80% probability with 95% confidence): 42.6 mm**
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item b.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1456	0		1472	0	
2	1577	0		1570	0	
3	1667	0		1682	0	
4	1721	0		1770	0	
5	1807	0		1861	1	
6	1886	1		1780	0	
7	1851	1		1841	1	
8	1758	0		1785	0	
9	1802	0		1850	0	
10	1858	0		1878	0	
11	1833	0		1942	1	
12	1949	0		1877	1	
13						
14						
15						

Shot Number	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1467	0		1471	0	*Panel tested on 1/4/13 on Range 2
2	1554	0		1599	0	Crawford/Childers/Nguyen
3	1660	0		1666	0	
4	1773	0		1777	0	
5	1874	1		1858	1	
6	1793	0		1805	1	
7	1840	0		1718	0	
8	1881	0		1768	0	
9	1926	0		1779	0	
10	1928	1		1866	0	
11	1911	0		1904	0	
12	1927	0		1906	0	
13						
14						
15						

Shot Number	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1477	0	
2	1581	0	
3	1690	0	
4	1766	0	
5	1814	1	
6	1799	1	
7	1718	0	
8			*No reading due to chronograph error.
9	1763	0	Repeated same charge at new location.
10	1813	0	
11	1839	0	
12	1906	0	
13	1968	0	
14			
15			

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1453	0	*Switched to 14" barrel due to excessive
2	1573	0	chamber pressures.
3	1663	0	
4	1746	0	
5	1822	0	
6	1901	1	
7	1838	1	
8	1801	0	
9	1833	0	
10	1904	0	
11	1919	1	
12	1889	0	
13			
14			
15			

Shot Number	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1446	0	
2	1575	0	
3	1663	0	
4	1749	1	
5	1656	0	
6	1743	0	
7	1785	0	
8	1813	0	
9	1884	1	
10	1823	0	
11	1881	0	
12	1901	0	
13			
14			
15			

Shot Number	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1465	0	
2	1561	0	
3	1676	0	
4	1774	0	
5	1861	0	
6	1959	1	
7	1867	1	
8	1769	0	
9	1853	0	
10	1922	0	
11	1936	1	
12	1908	1	
13			
14			
15			

Shot Number	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1449	0	
2	1591	0	
3	1684	0	
4	1769	0	
5	1832	1	
6	1761	0	
7	1813	0	
8	1894	0	
9	1909	1	
10	1875	0	
11	1923	0	
12	1983	0	
13			
14			
15			

Shot Number	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1452	0	
2	1567	0	
3	1665	0	
4	1753	0	
5	1859	0	
6	1950	1	
7	1863	1	
8	1788	1	
9	1734	0	
10	1757	0	
11	1851	0	
12	1882	0	
13			
14			
15			

Perforations below 1500 ft/s: 0 Acceptable

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	26	Requires review
Stops (Partial Penetrations):	94	Acceptable

Regression Analysis

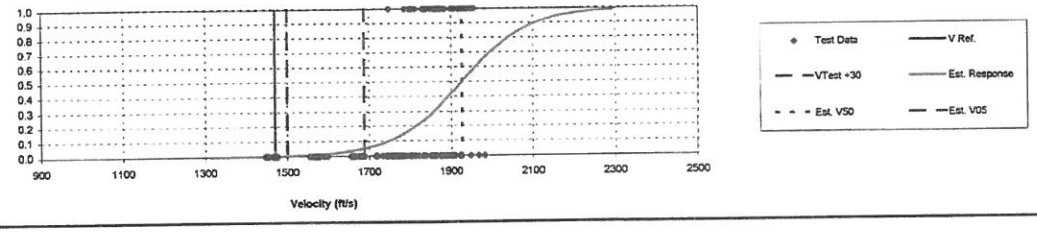
Regression Model: Logistic

Estimated V50: 1927 ft/s

Estimated V05: 514.5 m/s (1688) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.36%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1425	0		1425	0		1435	0		1437	0		1430	0	
2	1526	0		1531	0		1521	0		1515	0		1520	0	
3	1629	0		1609	0		1632	0		1615	0		1608	0	
4	1715	0		1707	0		1692	0		1710	0		1717	0	
5	1739	0		1800	1		1746	0		1785	1		1792	1	
6	1820	1		1724	1		1821	1		1709	1		1708	1	
7	1743	1		1634	0		1739	1		1643	0		1633	0	
8	1664	1		1696	0		1665	1		1694	0		1690	0	
9	1573	0		1730	0		1566	0		1743	1		1726	0	
10	1642	0		1799	1		1627	0		1676	0		1779	1	
11	1688	0		1743	1		1701	0		1748	1		1719	1	
12	1746	0		1685	0		1760	0		1697	0		1711	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1455	0		1451	0		1431	0		1450	0		1440	0	
2	1507	0		1518	0		1514	0		1530	0		1519	0	
3	1633	0		1601	0		1625	0		1622	0		1615	0	
4	1687	0		1709	0		1713	0		1701	0		1714	1	
5	1799	0		1803	1		1800	0		1802	0		1630	0	
6	1859	1		1736	1		1879	1		1880	1		1688	0	
7	1802	1		1643	0		1808	1		1796	1		1738	1	
8	1724	1		1692	1		1737	0		1733	0		1690	1	
9	1639	0		1639	0		1762	1		1774	1		1646	0	
10	1679	1		1701	1		1700	1		1719	0		1695	1	
11	1628	0		1640	0		1664	0		1767	0		1646	0	
12	1695	0		1700	0		1725	1		1844	1		1692	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	39	Acceptable
Stops (Partial Penetrations):	81	Acceptable
Perforations below 1460 ft/s:	0	Acceptable

Regression Analysis

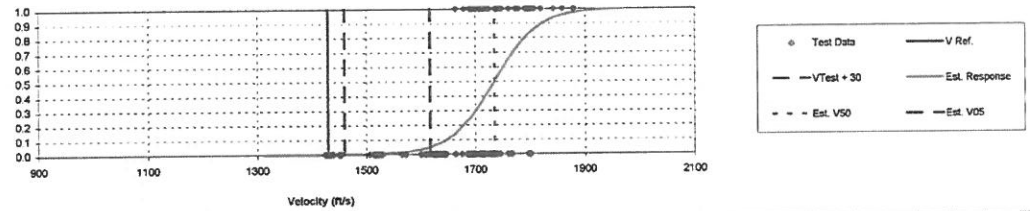
Regression Model: Logistic

Estimated V50: 1735 ft/s

Estimated V05: 492.8 m/s (1617) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): 0.05% Acceptable

Test Data and Regression Model



Threat 1 - Conditioned Armor

Ammunition: 357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1406	0		1408	0	
2	1515	0		1547	0	
3	1636	0		1651	0	
4	1736	0		1697	0	
5	1788	1		1800	0	
6	1694	0		1892	0	
7	1776	0		1955	1	
8	1807	1		1891	1	
9	1756	0		1780	0	
10	1833	0		1851	0	
11	1892	1		1874	1	
12	1804	0		1809	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1855 ft/s

Threat 2 - Conditioned Armor

Ammunition: 44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1346	0		1368	0	
2	1447	0		1443	0	
3	1549	1		1519	0	
4	1451	0		1624	0	
5	1510	0		1710	1	
6	1547	0		1656	0	
7	1612	0		1679	0	
8	1675	0		1732	1	
9	1694	0		1687	0	
10	1765	1		1739	1	
11	1704	1		1695	0	
12	1642	0		1721	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1718 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditioned

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only

Threat 1: 0.36%
Threat 2: 0.05%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

Mike Amory - 304-925-0305
6601 MacCorkle Ave SE Charleston, WV 25304
WV VEDOR# VC0000010150

Modern Firearms of Chattanooga, LLC

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Level II Soft Armor $655.35
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Mike Amory - 304-925-0305
6601 MacCorkle Ave SE Charleston, WV 25304
WV VEDOR# VC0000010150

Modern Firearms of Chattanooga, LLC

ADDITIONAL ITEMS:

OC or DHS TACTICAL CARRIER	$145.00 EACH
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*These prices, unless directly stated that they cannot be by the State of West Virginia, will be offered to all Law Enforcement agencies, Fire, EMS and government agencies in the state of West Virginia.

Some of the Agencies using Survival Armor:

Department of Homeland Security, Department of State, Lexington Metro PD (females), Lansing PD, Columbus PD, Franklin Co SO, Hilliard PD, Westerville PD, Upper Arlington PD, Grandview Heights PD, Dublin PD, Perry Twp PD, Gahanna PD, Hocking Co SO, Ohio Univ PD, Athens Co SO, Dayton PD, Dayton Airport PD, Springfield PD, Huber Heights PD, Cincinnati PD, Hamilton Co SO, Mason PD, Delhi Twp PD, Marion Co SO, Delaware PD, Richland Co SO, Canton Fire, North Canton PD, Akron PD, Cuyahoga Falls PD, Richfield PD, Stark Co SO, Ohio State Highway Patrol

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

October 8, 2014

Ken Mueller
Director of Operations / R&D
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-FEM-IIIA
NIJ Compliance Status Expires: October 8, 2019

Dear Mr. Mueller:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

All compliance requirements, as identified by the *NIJ Body Armor Compliance Testing Program Administrative Manual* and the *Ballistic Body Armor Applicant Package*, must be maintained as long as the NIJ Statement of Compliance is displayed on this armor model's labels. If, at any time, the compliance status of this armor model is changed, the NIJ Statement of Compliance shall cease to be used as of the date of the status change.

Sincerely,

Michael K. O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

February 25, 2014

Ken Mueller
Director of Operations / R&D
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-IIIA
NIJ Compliance Status Expires: February 25, 2019

Dear Mr. Mueller:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

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Sincerely,

Michael K O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 200818-0
60

Test Laboratory Name: United States Test Laboratory
Report Identification Number 12N012
Issue / Revision Number Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

NIJ Armor Type: 2

Manufacturer: Survival Armor, Inc.

Ammunition: 9mm 124/FMJ

Threat 1 - New Armor
Test Velocity: 1305 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1278	0		1288	0		1332	0		1288	0		1313	0	
2	1405	0		1432	0		1460	0		1405	0		1390	0	
3	1531	0		1530	0		1516	0		1527	0		1536	0	
4	1614	0		1635	0		1641	0		1598	0		1617	0	
5	1709	1		1734	1		1723	1		1735	1		1726	1	
6	1641	1		1635	1		1655	0		1651	0		1648	1	
7	1580	0		1553	0		1726	1		1707	0		1578	0	
8	1599	0		1621	0		1655	0		1757	1		1630	0	
9	1671	1		1682	0		1696	0		1682	0		1660	0	
10	1622	0		1745	1		1740	0		1742	0		1698	1	
11	1649	0		1691	1		1788	1		1778	1		1687	1	
12	1737	1		1631	1		1821	1		1748	0		1639	0	
13															
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1291	0		1285	0		1276	0		1299	0		1279	0	
2	1399	0		1412	0		1381	0		1431	0		1396	0	
3	1504	0		1527	0		1522	0		1508	0		1537	0	
4	1632	0		1651	0		1647	0		1644	1		1620	0	
5	1728	0		1729	1		1719	1		1543	0		1700	1	
6	1719	0		1646	0		1670	1		1621	0		1640	0	
7	1876	0		1716	1		1561	0		1663	0		1700	0	
8	1929	1		1635	0		1601	0		1705	0		1745	0	
9	1876	1		1701	0		1720	0		1752	1		1784	1	
10	1850	1		1764	1		1729	0		1700	0		1733	1	
11	1780	0		1681	1		1784	1		1771	0		1703	0	
12	1822	0		1653	0		1745	0		1707	0		1742	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	35	Acceptable
Stops (Partial Penetrations)	85	Acceptable

Perforations below 1335 ft/s: 0 Acceptable

Regression Analysis

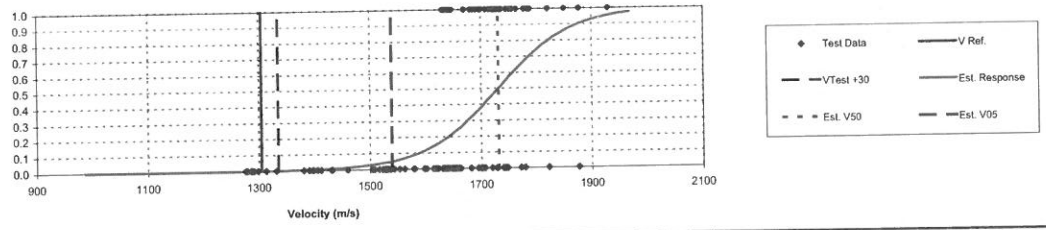
Regression Model: Logistic

Estimated V50: 1731 ft/s

Estimated V05: 469.2 m/s (1539) ft/s

Probability of perforation at NIJ reference velocity (1305 ft/sec): **0.14%** Acceptable

Test Data and Regression Model



For Test Laboratory Use

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 60 — 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

NIJ Armor Type: 2

Manufacturer: Survival Armor, Inc.

Ammunition: .357 Mag 158/JSP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1434	0		1430	0		1459	0		1448	0		1420	0	
2	1509	0		1505	1		1526	0		1527	0		1502	0	
3	1610	0		1445	0		1592	0		1601	0		1602	0	
4	1671	1		1510	0		1682	1		1690	1		1683	0	
5	1628	1		1545	0		1645	1		1632	1		1730	1	
6	1564	0		1585	1		1591	0		1598	0		1711	1	
7	1628	1		1557	0		1622	1		1614	0		1656	1	
8	1571	0		1581	0		1573	0		1651	1		1602	0	
9	1604	0		1636	0		1622	0		1627	0		1638	0	
10	1645	0		1674	1		1660	1		1665	1		1666	1	
11	1705	1		1650	1		1594	1		1616	0		1630	1	
12	1666	1		1574	0		1568	1		1659	0		1604	1	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1404	0		1413	0		1430	0		1444	0		1414	0	
2	1527	0		1531	0		1528	1		1527	0		1525	0	
3	1597	1		1613	0		1413	0		1624	0		1620	1	
4	1554	0		1705	0		1482	0		1698	1		1572	0	
5	1599	0		1743	0		1554	0		1649	1		1582	1	
6	1652	0		1708	1		1586	0		1571	0		1554	0	
7	1684	1		1766	1		1638	1		1611	0		1588	0	
8	1638	1		1729	1		1554	0		1667	1		1636	0	
9	1595	0		1700	0		1642	0		1622	1		1661	0	
10	1631	1		1720	1		1669	0		1549	0		1716	0	
11	1584	0		1682	1		1717	1		1639	0		1746	1	
12	1642	0		1626	1		1667	1		1646	1		1717	1	
13															
14															
15															

Perforations below 1460 ft/s: 0 Acceptable

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	48	Acceptable
Stops (Partial Penetrations):	72	Acceptable

Regression Analysis

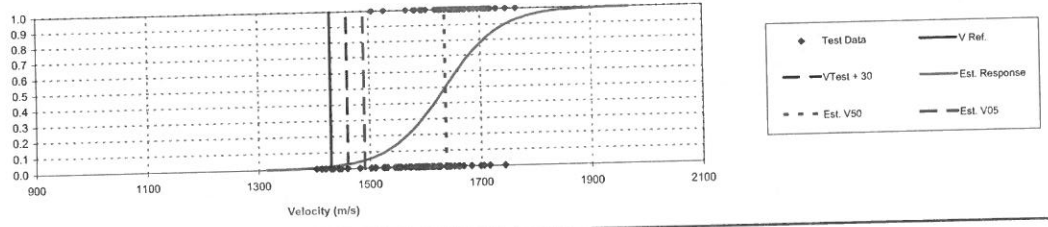
Regression Model: Logistic

Estimated V50: 1637 ft/s

Estimated V05: 454.1 m/s (1490) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **1.57%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 200818-0
60

Test Laboratory Name: United States Test Laboratory
Report Identification Number 12N012
Issue / Revision Number Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

NIJ Armor Type: 2

Manufacturer: Survival Armor, Inc.

Threat 1 - Conditioned Armor

Ammunition: 9mm 124/FMJ
Test Velocity: 1245 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1256	0		1274	0	
2	1399	0		1374	0	
3	1481	0		1453	0	
4	1599	1		1529	0	
5	1509	0		1621	1	
6	1531	0		1528	0	
7	1563	0		1573	0	
8	1646	0		1577	0	
9	1639	0		1636	0	
10	1711	1		1684	0	
11	1669	1		1724	1	
12	1637	1		1671	1	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	7	
Stops (PP):	17	
Perforations below 1275 ft/s:	0	Acceptable

Estimated V50: 1641 ft/s

Threat 2 - Conditioned Armor

Ammunition: .357 Mag 158/JSP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Num	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1319	0		1359	0	
2	1442	0		1420	0	
3	1524	0		1560	1	
4	1624	1		1490	0	
5	1573	0		1536	0	
6	1630	1		1608	1	
7	1541	0		1563	1	
8	1630	1		1501	0	
9	1562	0		1572	0	
10	1614	1		1605	0	
11	1575	0		1653	1	
12	1588	0		1594	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	8	
Stops (PP):	16	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1593 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditione

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only

Threat 1: 0.14%
Threat 2: 1.57%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Report Date: 09/25/12
NIJ Armor Type: 2

Ammunition: 9mm 124/FMJ

Threat 1 - New Armor
Test Velocity: 1305 ± 30 ft/s

Conditioning: New

Sample 1 **Size:** C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1338	0	31.1		1311	0	30.42	
2	1313	0	27.48		1320	0	33.95	
3	1309	0	29.7		1307	0	38.28	
4	1311	0		g	1314	0		
5	1308	0		g	1324	0		
6	1313	0			1328	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 38.3 mm
Pass - No BFS greater than 44 mm

Sample 2 **Size:** C-5

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1309	0	29.18		1322	0	28.04	
1304	0	28.57		1315	0	31.09	
1317	0	25.2		1300	0	33.86	
1330	0		g	1316	0		
1300	0		g	1316	0		
1294	0			1286	0		

BFS Statistics: Count: 12
Average: 30.57 mm
St. Dev: 3.48687 mm

Sample 3 **Size:** C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1286	0	35.74		1310	0	33.6	
2	1329	0	39.76		1320	0	32.15	
3	1324	0	35.84		1312	0	32.13	
4	1309	0		g	1296	0		
5	1353	0			1312	0		
6	1350	0			1319	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 39.8 mm
Pass - No BFS greater than 44 mm

Sample 4 **Size:** C-1

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1316	0	35.53		1313	0	33.75	
1324	0	36.9		1302	0	32.01	
1303	0	36.88		1328	0	34.92	
1283	0		g	1302	0		
1311	0			1304	0		
1307	0			1301	0		

BFS Statistics: Count: 12
Average: 34.93 mm
St. Dev: 2.33769 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Report Date: 09/25/12
NIJ Armor Type: 2

Threat 2 - New Armor
Ammunition: .357 Mag 158/JSP
Test Velocity: 1430 ± 30 ft/s
Conditioning: New

Sample 5 **Size:** C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1446	0	34.16		1418	0	36.27	
2	1444	0	33.81		1445	0	35.62	
3	1444	0	36.14		1438	0	36.18	
4	1443	0			1428	0		
5	1442	0		g	1432	0		
6	1432	0			1427	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 36.3 mm
Pass - No BFS greater than 44 mm

Sample 6 **Size:** C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1430	0	35.94		1427	0	30.45	
2	1444	0	34.24		1429	0	35.17	
3	1424	0	31.41		1433	0	32.66	
4	1432	0		g	1439	0		
5	1434	0			1437	0		
6	1429	0			1441	0		
7								
8								

BFS Statistics: Count: 12
Average: 34.34 mm
St. Dev: 1.95635 mm

Sample 7 **Size:** C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1410	0	39.95		1443	0	38.45	
2	1423	0	41.2		1415	0	33.48	
3	1414	0	39.97		1411	0	35.51	
4	1432	0			1426	0		
5	1401	0			1424	0		
6	1423	0			1410	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 41.2 mm

Sample 8 **Size:** C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1415	0	38.53		1441	0	37.28	
2	1436	0	37.87		1456	0	36.42	
3	1448	0	40.4		1433	0	36.15	
4	1452	0			1458	0		
5	1433	0			1436	0		
6	1422	0			1440	0		
7								
8								

BFS Statistics: Count: 12
Average: 37.93 mm
St. Dev: 2.28034 mm

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Report Date: 09/25/12
NIJ Armor Type: 2

Threat 1 - Conditioned Armor

Ammunition: 9mm 124/FMJ
Test Velocity: 1245 ± 30 ft/s
Conditioning: Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1256	0	34.38		1268	0	33.62		1242	0	33.79		1246	0	35.1	
2	1238	0	35.1		1237	0	37.2		1262	0	29.96		1256	0	36.66	
3	1252	0	34.68		1269	0	40.01		1253	0	37.38		1270	0	39.6	
4	1236	0		g	1250	0			1240	0		g	1269	0		
5	1245	0		g	1269	0			1284	0			1254	0		
6	1263	0			1272	0			1265	0			1265	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 40.01 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 39.6 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .357 Mag 158/JSP
Test Velocity: 1340 ± 30 ft/s
Conditioning: Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1310	0	37.71		1325	0	34.58		1323	0	37.96		1351	0	35.98	
2	1340	0	45.48		1353	0	43.11		1345	0	41.91		1356	0	40.98	
3	1352	0	33.55		1345	0	32.71		1312	0	43.09		1347	0	41.01	
4	1360	0		g	1323	0			1311	0			1325	0		
5	1334	0			1336	0			1344	0			1319	0		
6	1344	0			1341	0			1320	0			1311	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 45.48 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 43.09 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: **41.2 mm**
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-889

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 3 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

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Chesapeake Testing is an independent testing facility and has no affiliation with United Shield International.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 3 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 2	Proprietary	10.00 x 12.00	0.87	1.04

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- .357-cal., 125-grain SIG gold dot hollow point (GDHP) projectiles.
- 9-mm +P+, 127-grain supreme expansion technology (SXT) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (66.7 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 2	0.0	.357-cal., 125-grain SIG GDHP	1	1399	None	17.2
				2	1395	None	16.3
			9-mm +P+, 127-grain SXT	3	1251	None	13.8
				4	1255	None	14.5

BALLISTIC RESISTANCE TEST

Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International
Job No.: 2161-012-1
Test Date: 6/3/2013

Test Panel

Description: Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International

Sample No.: Panel 2

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 66.7 F
Obliquity: 0.0	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 55.8%
Condition: Ambient		Barrel/Gun: CT-3017
		Gunner: Matt Settle
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) .357-cal., 125-grain SIG GDHP	Speer 23918	Accurate No. 2
(2) 9-mm +P+, 127-grain SXT	Winchester RA9TA	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.0 mm, 18.5 mm, 19.5 mm, 19.5 mm, 19.4 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3574	1399	3098	1399	1399	None	17.2	
2	1	3585	1395	3107	1395	1395	None	16.3	
3	2	3995	1252	3465	1251	1251	None	13.8	
4	2	3983	1255	3452	1255	1255	None	14.5	

Remarks:

R3 box temp.: 99.0 F
Block 04 clay temp.: 98.9 F
The plate was impacted with a soft armor panel behind it.
Plate weight: 0.87 lbs, Soft Armor Weight: 1.98 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-815-R1

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 3 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

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UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 3 and 5 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 1	Proprietary	10.00 x 12.00	0.84	1.01

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- .44-mag., 240-grain semi-jacketed hollow point (SJHP) projectiles.
- .357-cal., 125-grain SIG full metal jacketed flat nose (FMJ FN) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (66.9 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 1	0.0	.44-mag., 240-grain SJHP	1	1444	None	32.7
				2	1443	None	30.1
			.357-cal., 125-grain SIG FMJ FN	3	1466	None	14.7
				4	1461	None	13.5

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International
Job No.: 2161-012-1
Test Date: 6/3/2013

Test Panel

Description: Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International

Sample No.: Panel 1

Size: See remarks
Thickness: NA
Avg. Thick: NA

Heat No.: NA
Weight: See remarks
Hardness: NA
Plies/Laminates: NA

Date Received: 5/31/2013
Via: FedEx
Returned: FedEx

Setup

Shot Spacing: Customer request
Witness Panel: Clay
Obliquity: 0.0°
Backing Material: 5.5-in clay/plywood
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500
Primary Vel. Location (ft): 9.000
Range to Target (ft): 17.200
Target to Witness (in): 0.000

Range No.: 3
Temp: 66.9 F
BP: 29.7 inHg
RH: 56.5%
Barrel/Gun: CT-3017
Gunner: Matt Settle
Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) .44-mag., 240-grain SJHP	Speer	Accurate No. 5
(2) .357-cal., 125-grain SIG FMJ FN	Speer 4731	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.3 mm, 18.9 mm, 19.0 mm, 19.7 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3469	1441	2996	1446	1444	None	32.7	
2	1	3470	1441	2997	1446	1443	None	30.1	
3	2	3410	1466	2956	1466	1466	None	14.7	
4	2	3421	1462	2965	1461	1461	None	13.5	

Remarks:

R3 box temp.: 99.0 F
Block 04 clay temp.: 100.7 F
The plate was impacted with a soft armor panel behind it.
Plate weight: 0.84 lbs, Soft Armor Weight: 1.98 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-891

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 5 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

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UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 5 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 4	Proprietary	10.00 x 12.00	0.88	1.06

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- 5.70 x 28-mm 27-grain SS195 lead free hollow point (LFHP) projectiles.
- 5.70 x 28-mm 40-grain Hornady V-Max (Blue Tip) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (65.6 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 4	0.0	5.70 x 28-mm, 27-grain SS195 LFHP	1	2300	None	13.1
				2	2329	None	13.3
			5.70 x 28-mm, 40-grain Hornady V-Max (Blue Tip)	3	2017	None	7.5
				4	2014	None	9.1

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International, LLC
Job No.: 2161-012-1
Test Date: 6/5/2013

Test Panel

Description: Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International, LLC

Sample No.: Panel 4

Size: See remarks
Thickness: NA
Avg. Thick: NA

Heat No.: NA
Weight: See remarks
Hardness: NA
Plies/Laminates: NA

Date Received: 5/31/2013
Via: FedEx
Returned: FedEx

Setup

Shot Spacing: Customer request
Witness Panel: Clay
Obliquity: 0.0°
Backing Material: 5.5-in clay/plywood
Condition: Ambient

Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500
Primary Vel. Location (ft): 9.000
Range to Target (ft): 17.200
Target to Witness (in): 0.000

Range No.: 1
Temp: 65.6 F
BP: 30 inHg
RH: 48.7%
Barrel/Gun: CT-3037
Gunner: Jordan Mears
Recorder: Keith Crouse

Ammunition

Projectile	Lot No.	Powder
(1) 5.70 x 28-mm, 27-grain SS195 LFHP	FNH USA FNB10A901 -012	Factory load
(2) 5.70 x 28-mm, 40-grain Hornady V-Max (Blue Tip)	FNH USA 0117169088	Factory load

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 19.3 mm, 19.7 mm, 20.3 mm, 18.4 mm, 17.8 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	2172	2302	1886	2297	2300	None	13.1	
2	1	2145	2331	1862	2327	2329	None	13.3	
3	2	2477	2019	2149	2016	2017	None	7.5	
4	2	2482	2015	2153	2013	2014	None	9.1	

Remarks:
R1 box temp.: 99.0 °F
Block 05 clay temp.: 97.6 °F
Panel impacted with a soft armor panel behind it.
Plate weight: 0.88 lbs, Soft Armor Weight: 2.09 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

.44 panel 4, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	436.0	Held	C	
3	441.8	Held	C	

.44 panel 5, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	437.8	Held	C	
3	437.1	Held	C	

.44 panel 6, 0.558kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	445.1	Held	C	
2	437.5	Held	C	
3	436.4	Held	C	

END OF REPORT

ANNEX A

RESULTS

9mm panel 1, 0.550kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	437.5	Held	C	
2	441.3	Held	C	
3	437.1	Held	C	

9mm panel 2, 0.791kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	439.0	Held	C	
2	447.9	Held	C	Fast
3	423.7	Held	C	Slow

9mm panel 3, 0.789kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	437.4	Held	C	
2	428.7	Held	C	
3	438.2	Held	C	

SURVIVAL ARMOR®

Survival Armor® Achieves ISO 9001:2008/BA 9000:2012

Press Release

Ft. Myers, Florida, November 14, 2014- Survival Armor President Larry McCraney is pleased to announce that Survival Armor is promoting their dedication to be unparalleled in quality manufacturing by achieving the ISO 9001:2008 / BA 9000:2012 certification. The BA 9000:2012 certification was developed to coincide and reinforce standards required by the National Institute of Justice.

Survival Armor is one of the only ISO 9001:2008/BA 9000:2012 body armor manufacturers in the world to obtain this prestigious certification that strictly focuses on quality assurances when manufacturing body armor. Since the release of the BA 9000:2012 standard Survival Armor has focused on maintaining and improving their efforts to go above and beyond the requirements needed to achieve the BA 9000:2012 certification.

This certification is just another testament to Survival Armor's dedication to protect those who protect us. Their ability and drive to provide their customers with the most innovative and highest quality products possible is their priority. They continue to strive toward excellence by producing the best body armor in the world.

It's All About Survival...

About Survival Armor

Survival Armor® is located in Fort Myers, Florida. Survival Armor has brought together some of the best minds from the US ballistic protection industry combining well over 80 years of experience. Manufacturer of innovating patented concealable and tactical body armor in male and structured female, as well as, transportation protection for law enforcement, military and federal governments. Survival Armor, Inc.'s organization's quality management system is compliant with ISO 9001:2008 / BA 9000:2012.

PERRY JOHNSON REGISTRARS, INC.

ANAB ACCREDITED

12621 Corporate Lakes Drive, Unit 8 – Fort Myers, FL 33913

Phone: 866.868.5001 Fax: 239.210.0898 Web: www.survivalarmor.com

SURVIVAL ARMOR INTEGRATED MEDICAL KIT

The kit contents of the Survival Armor Integrated Medical Kit are designed to give EVERY responding officer the means to effectively deal with the two main causes of preventable combat deaths (penetrating trauma):

- Extremity Hemorrhage
- Tension Pneumothorax

Kit dimensions: 7 3/4 wide x 3 1/4 tall x 1/2" thick
Kit weight including deployment pouch: 7.5 oz

CONTENTS:

Kit 1
(1) SWAT T Tourniquet
(1) wound packing Gauze
(1) duct tape
(2) occlusive dressings
(1) pair nitrile gloves

Kit 2
(1) SWAT T Tourniquet
(1) Quikclot® combat Gauze
(1) duct tape
(2) occlusive dressings
(1) pair nitrile gloves

Kit deploys from integrated deployment pouch out of Vertex6 concealable carrier
- *OR* - from retrofit vertex 6 pouch



SURVIVAL ARMOR®

Technical Specification

Paragon^6

Level IIIA – FEM – NIJ 0101.06 Requirement

Model Number	LW-FEM-IIIA
Ballistic Material	Aramid/Polyethylene
Pad Cover	TPU Coated *Ripstop*
NIJ Level	IIIA
Weight (Areal Density)	1.05 lbs/ft^2
Thinness	.24 inches

V50 357sig	1893 fps
V50 44mag	1762 fps

Certification Backface- 357sig	27.03 mm
Certification Backface- 44mag	35.22 mm

SURVIVAL ARMOR®

Technical Specification

Paragon^6

Level II – NIJ 0101.06 Requirement

Model Number	LW-II
Ballistic Material	Aramid/Dyneema
Pad Cover	TPU Coated *Ripstop*
NIJ Level	II
Weight (Areal Density)	.77 lbs/ft^2
Thinness	.17 inches

V50 9mm	1629 fps
V50 357mag	1556 fps

Certification Backface- 9 mm	32.48 mm
Certification Backface- 357 mag	32.53 mm

SURVIVAL ARMOR®

Technical Specification

Paragon[6]

Level IIIA – NIJ 0101.06 Requirement

Model Number	LW-IIIA
Ballistic Material	Aramid/Polyethylene
Pad Cover	TPU Coated *Ripstop*
NIJ Level	IIIA
Weight (Areal Density)	1.05 lbs/ft^2
Thinness	.20 inches
V50 357sig	1927 fps
V50 44mag	1735 fps
Certification Backface- 357sig	29.4 mm
Certification Backface- 44mag	38.8 mm

0° dry		Required V50 (fps)	Actual V50 (fps)	% of Required
2 grain RCC		2710	3096	114%
4 grain RCC		2400	2675	111%
16 grain RCC		2050	2254	110%
64 grain RCC		1660	1859	112%
17 grain FSP		1850	2174	118%

United Shield International

SPARTAN PANEL
NIJ Level IIIA Panel

The Spartan panel is a high performance, lightweight and ultra thin panel designed to provide discrete protection against hand guns, knives and explosion. Spartan is rated to NIJ Level IIIA 0108.01 (Ballistic resistant protective materials) which includes 44 magnum and 9mm and all lesser threats. Spartan is constructed from United Shield's advanced proprietary technology and is available curved or flat.





Weight &Thickness

10 x 12 inch plate weighs .96lb (440 grams)
and is 3/16 inch thick (<5mm)

Sizes

10 x 12 inches (25 x 30cm),
9 x 7 inches (23 x 18cm),
8 x 5 inches (20 x 12cm)
Other sizes and bespoke shapes available on request

Applications

Spartan can be used in a variety of different applications including backpacks, clipboards, briefcases, handbags ,trauma armor, Structural armor, upgrade plates etc.

Colors

The standard plate has a black nylon wrap. Other colors and finishes are available on request.

Warranty & Quality Assurance

United Shield International Ltd offers a five year warranty on ballistic performance and is an ISO9001:2008 registered company.

Special threat-tested against the following rounds:

- FN 5.7 X 28mm 27-grain SS195 LFHP
- .44 MAG, 240-grain SJHP
- .357 SIG 125-grain GDHP
- FN 5.7 X 28mm 40-grain Hornady V-Max (Blue Tip)
- .357 SIG 125 grain FMJFN
- 9-mm +P+, 127-grain SXT

International
United Shield International Ltd.
56 South Way, Walworth Industrial Estate, Andover,
Hampshire, SP10 5AF, England
Phone: +44 (0)1264 363 606, Fax +44 (0)1264 363 666
Email: sales@unitedshield.com, www.unitedshield.com

North America
United Shield International LLC
1606 Barlow St, Unit 1, Traverse City
MI 49686,USA
Phone: +1 231 933 1179, Fax: +1 231 933 5368
Email: unitedshield.pjb@gmail.com,
www.unitedshield.com

RFQ No. DPS1500000008

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Modern Firearms of Chattanooga, LLC

Authorized Signature: _____ Date: 01/05/2015

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 6 day of January, 2015.

My Commission expires April 4, 2024.

AFFIX SEAL HERE

NOTARY PUBLIC OFFICIAL SEAL
CARRIE E. SHEPHERD
State of West Virginia
My Commission Expires Apr. 4, 2024
4515 MacCorkle Ave., Charleston, WV 25301

NOTARY PUBLIC _____

Purchasing Divison
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Request for Quotation
31 — Public Safety

Proc Folder: 50832

Doc Description: Addendum No. 2 - Responses to vendor questions

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2014-12-18	2015-01-06 13:30:00	CRFQ 0612 DPS1500000008	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number: Modern Firearms 6601 MacCorkle Ave SE Charleston, WV 25304 ~ WV VENDOR#
Mike Amory Phone: 304-925-0305 Cell: 304-932-9232 Fax: 304-925-3648
FFL: 4-55-039-01-6M-02775 / 100% Woman Owned Small Business (031014-02)
CAGE CODE: 726Q6 / DUNS: 005649370 / EIN: 30-0441280 / E-VERIFY NUMBER 761984

01/06/15 12:54:24
West Virginia Purchasing Division

FOR INFORMATION CONTACT THE BUYER

Tara Lyle
(304) 558-2544
tara.l.lyle@wv.gov

Signature X _____ **FEIN #** 30-0441280 **DATE** 01/05/2015

All offers subject to all terms and conditions contained in this solicitation

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Bullet proof vests	100.00000	EA	$572.00	$57,200.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Level II soft armor 2 carriers, trama pac, STP	WVSP II

Extended Description :

Addendum No. 2 - Responses to vendor questions attached. See attached pages. The bid opening remains on 01/06/2015 at 1:30 pm.

The WV Purchasing Division for the agency, WV State Police, is soliciting bids for an open-end contract to provide body armor for the WV State Police, the WV Division of Natural Resources Police and the WV Division of Protective Services (Capitol Police), per the attached specifications.

Level II Body Armor-See attached specifications

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Bullet proof vests	100.00000	EA	$684.00	$68,400.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival ArmorLevel IIIA soft armor 2 carriers, trama pac, STP		WVSP IIIA

Extended Description :

Level IIIA Body Armor-See attached specifications

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Bullet proof vests	100.00000	EA	$67.95	$6,995.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Tactical Outer Carrier SAMPLED	WVSPTC

Extended Description :
Tactical Outer Carrier

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Bullet proof vests	100.00000	EA	$57.95	$5,795.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	Concealable Carrier SAMPLED	WVSPCC

Extended Description :
Concealable Carriers

INVOICE TO	SHIP TO
WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV25309 US	WEST VIRGINIA STATE POLICE 4124 KANAWHA TURNPIKE SOUTH CHARLESTON WV 25309 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
5	Bullet proof vests	100.00000	EA	$87.00	$8,700.00

Comm Code	Manufacturer	Specification	Model #
46181502	Survival Armor	GUN SHOT KIT SAMPLED	WVSPSK

Extended Description :
Gunshot Medical Kit affixed to the Body Armor

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

Some of the Agencies using Survival Armor:
Department of Homeland Security, Department of State, Lexington Metro PD (females), Lansing PD, Columbus PD, Franklin Co SO, Hilliard PD, Westerville PD, Upper Arlington PD, Grandview Heights PD, Dublin PD, Perry Twp PD, Gahanna PD, Hocking Co SO, Ohio Univ PD, Athens Co SO, Dayton PD, Dayton Airport PD, Springfield PD, Huber Heights PD, Cincinnati PD, Hamilton Co SO,Mason PD, Delhi Twp PD, Marion Co SO, Delaware PD, Richland Co SO, Canton Fire, North Canton PD,Akron PD, Cuyahoga Falls PD, Richfield PD, Stark Co SO, Ohio State Highway Patrol

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 1

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[ ] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[X] Other

Description of Modification to Solicitation:

1. The body armor must meet or exceed the 2014 FBI body armor (ballistics) protocol. If should provide documentation that armor meets or exceeds the 2014 FBI protocol prior to contract award.

2. The bid opening remains on 01/06/2015 at 1:30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

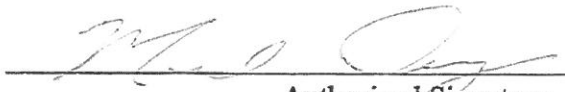
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[x]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company


Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

SOLICITATION NUMBER: DPS1500000008
Addendum Number: 2

The purpose of this addendum is to modify the solicitation identified as DPS1500000008 ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[ ] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[X] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[ ] Other

Description of Modification to Solicitation:

1. Responses to vendor question attached.
2. The bid opening remains on 01/06/2015 at :30 pm.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

CRFQ – DPS1500000008
ADDENDUM NO. 2

Questions:

Q1: Is there a color request for the vests?

A1: See Section 3.1.1.1 under the General Design subsection states the following:

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre- approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

Q2: Should the medical bag be full of supplies or empty?

A2: See Section 3.1.1.1 under the Options subsection states the following:

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

Q3: Should the medical bag be permanently affixed or attached using MOLLE or hook and loop?

A3: The retrofit pouch may be attached by velcro.

Other Information:

1. The bid opening remains on 01/06/2015 at 1:30 pm.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DPS1500000008

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

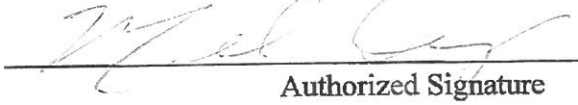
Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[ ]	Addendum No. 1	[ ]	Addendum No. 6
[X]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Modern Firearms of Chattanooga, LLC
Company



Authorized Signature

01/05/2015
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. **REVIEW DOCUMENTS THOROUGHLY:** The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. **MANDATORY TERMS:** The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. **PREBID MEETING:** The item identified below shall apply to this Solicitation.

   ☑ A pre-bid meeting will not be held prior to bid opening.

   ☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

   ☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing. Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. **VENDOR QUESTION DEADLINE:** Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are non-binding. Submitted e-mails should have solicitation number in the subject line.

   Question Submission Deadline: 12/17/2014 by 4:00 pm

   Submit Questions to: Tara Lyle
   2019 Washington Street, East
   Charleston, WV 25305
   Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
   Email: Tara.L.Lyle@wv.gov

5. **VERBAL COMMUNICATION:** Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. **BID SUBMISSION:** All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile. The bid delivery address is:

   Department of Administration, Purchasing Division
   2019 Washington Street East
   Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER:
SOLICITATION NO.:
BID OPENING DATE:
BID OPENING TIME:
FAX NUMBER:

In the event that Vendor is responding to a request for proposal, and choses to respond in a manner other than by electronic submission through wvOASIS, the Vendor shall submit one original technical and one original cost proposal plus convenience copies of each to the Purchasing Division at the address shown above. Additionally, if Vendor does not submit its bid through wvOASIS, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

☐ Technical

☐ Cost

7. **BID OPENING:** Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

   Bid Opening Date and Time: 01/06/2015 at 1:30 pm
   Bid Opening Location: Department of Administration, Purchasing Division
   2019 Washington Street East
   Charleston, WV 25305-0130

8. **ADDENDUM ACKNOWLEDGEMENT:** Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. **BID FORMATTING:** Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. **ALTERNATES:** Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

11. **EXCEPTIONS AND CLARIFICATIONS:** The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. **COMMUNICATION LIMITATIONS:** In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. **REGISTRATION:** Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the $125 fee, if applicable.

14. **UNIT PRICE:** Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. **PREFERENCE:** Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. **SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES:** For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the

same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. **WAIVER OF MINOR IRREGULARITIES:** The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

GENERAL TERMS AND CONDITIONS:

1. **CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. **DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

   2.1. **"Agency"** or **"Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

   2.2. **"Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

   2.3. **"Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.

   2.4. **"Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.

   2.5. **"Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

   2.6. **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

   2.7. **"State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

   2.8. **"Vendor"** or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. **CONTRACT TERM; RENEWAL; EXTENSION:** The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☑ **Term Contract**

Initial Contract Term: This Contract becomes effective on award and extends for a period of one (1) year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to three (3) successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed 36 months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional _____ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. **NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. **QUANTITIES:** The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

   ☑ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

   ☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

   ☐ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

   ☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. **PRICING:** The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. **EMERGENCY PURCHASES:** The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. **REQUIRED DOCUMENTS:** All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under $100,000. Personal or business checks are not acceptable.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

☐ **Commercial General Liability Insurance:** In the amount of _____ _____ or more.

☐ **Builders Risk Insurance:** In an amount equal to 100% of the amount of the Contract.

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The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

☑ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. **WORKERS' COMPENSATION INSURANCE:** The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. **LITIGATION BOND:** The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or $5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

11. **LIQUIDATED DAMAGES:** Vendor shall pay liquidated damages in the amount of _____ for _____.
This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

12. **ACCEPTANCE/REJECTION:** The State may accept or reject any bid in whole, or in part. Vendor's signature on its bid signifies acceptance of the terms and conditions contained in the Solicitation and Vendor agrees to be bound by the terms of the Contract, as reflected in the Award Document, upon receipt.

13. **FUNDING:** This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

14. **PAYMENT:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. **TAXES:** The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

16. **CANCELLATION:** The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-7.16.2.

17. **TIME:** Time is of the essence with regard to all matters of time and performance in this Contract.

18. **APPLICABLE LAW:** This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

19. **COMPLIANCE:** Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable law.

20. **PREVAILING WAGE:** On any contract for the construction of a public improvement, Vendor and any subcontractors utilized by Vendor shall pay a rate or rates of wages which shall not be less than the fair minimum rate or rates of wages (prevailing wage), as established by the West Virginia Division of Labor under West Virginia Code §§ 21-5A-1 et seq. and available at http://www.sos.wv.gov/administrative-law/wagerates/Pages/default.aspx. Vendor shall be responsible for ensuring compliance with

prevailing wage requirements and determining when prevailing wage requirements are applicable. The required contract provisions contained in West Virginia Code of State Rules § 42-7-3 are specifically incorporated herein by reference.

21. **ARBITRATION:** Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

22. **MODIFICATIONS:** This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary, no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). No Change shall be implemented by the Vendor until such time as the Vendor receives an approved written change order from the Purchasing Division.

23. **WAIVER:** The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

24. **SUBSEQUENT FORMS:** The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

25. **ASSIGNMENT:** Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

26. **WARRANTY:** The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

27. **STATE EMPLOYEES:** State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

28. **BANKRUPTCY:** In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

29. **CONFIDENTIALITY:** The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/default.html.

30. **DISCLOSURE:** Vendor's response to the Solicitation and the resulting Contract are considered public documents and will be disclosed to the public in accordance with the laws, rules, and policies governing the West Virginia Purchasing Division. Those laws include, but are not limited to, the Freedom of Information Act found in West Virginia Code §§ 29B-1-1 et seq. and the competitive bidding laws found West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq.

    If a Vendor considers any part of its bid to be exempt from public disclosure, Vendor must so indicate by specifically identifying the exempt information, identifying the exemption that applies, providing a detailed justification for the exemption, segregating the exempt information from the general bid information, and submitting the exempt information as part of its bid but in a segregated and clearly identifiable format. Failure to comply with the foregoing requirements will result in public disclosure of the Vendor's bid without further notice. A Vendor's act of marking all or nearly all of its bid as exempt is not sufficient to avoid disclosure and WILL NOT BE HONORED. Vendor's act of marking a bid or any part thereof as "confidential" or "proprietary" is not sufficient to avoid disclosure and WILL NOT BE HONORED. A legend or other statement indicating that all or substantially all of the bid is exempt from disclosure is not sufficient to avoid disclosure and WILL NOT BE HONORED. Additionally, pricing or cost information will not be considered exempt from disclosure and requests to withhold publication of pricing or cost information WILL NOT BE HONORED.

    Vendor will be required to defend any claimed exemption for nondisclosure in the event of an administrative or judicial challenge to the State's nondisclosure. Vendor must indemnify the State for any costs incurred related to any exemptions claimed by Vendor. Any questions regarding the applicability of the various public records laws should be addressed to your own legal counsel prior to bid submission.

31. **LICENSING:** In accordance with West Virginia Code of State Rules §148-1-6.1.7, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

32. **ANTITRUST:** In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

33. **VENDOR CERTIFICATIONS:** By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein. Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

34. **PURCHASING CARD ACCEPTANCE:** The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

35. **VENDOR RELATIONSHIP:** The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but

not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing. Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. **INDEMNIFICATION:** The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to an y person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. **PURCHASING AFFIDAVIT:** In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of $1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.

38. **ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by and extends to other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). This Contract shall be extended to the aforementioned Other Government Entities on the same prices, terms, and conditions as those offered and agreed to in this Contract. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. **CONFLICT OF INTEREST:** Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. **REPORTS:** Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. **BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

    After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision.

    The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

    Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. **PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS:** Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

    a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.

    b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

    c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater.

For the purposes of this section, the cost is the value of the steel product as delivered to the project; or

d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars ($50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products.

This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

CERTIFICATIONAND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Modern Firearms of Chattanooga, LLC

(Company)

Mike Amory/Operations Manager

(Authorized Signature) (Representative Name, Title)

304-925-0305 / 304-925-3648 / 01/05/2015

(Phone Number) (Fax Number) (Date)

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of West Virginia State Police, West Virginia Natural Resources Police and the Division of Protective Services (Capitol Police to establish an open-end contract for Level II and Level IIIA Body Armor.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

   2.1 **"Contract Item"** or **"Contract Items"** means the list of items identified in Section 3, Subsection 1 below.

   2.2 **"Pricing Pages"** means the schedule of prices, estimated order quantity, and totals attached hereto as Exhibit A and used to evaluate the RFQ.

   2.3 **"RFQ"** means the official request for quotation published by the Purchasing Division and identified as CRFQ – DPS1500000008.

3. **GENERAL REQUIREMENTS:**

   3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

      3.1.1 **Contract Item No. 1 - Level II Body Armor**

      3.1.1.1 Level II Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

      Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level II. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should should include a male and female sample, full

product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level II Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

1. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification
6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level II
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level II, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper

positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema, or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
II	.79 lbs. sq. ft.	.19 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be performed in accordance with MIL-STD-662F using NIJ Standard-0101-

06 for Bullet Resistant Body Armor 9mm 124 grain FMJ RN and .357 Magnum 158 grain JSP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.

Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
II	9MM 124 Grain FMJ RN	1305 ft/s +/- 30 ft/s
II	.357 Magnum 158 Grain JSP	1430 ft/s +/- 30 ft/s

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
II	9MM 124 Grain FMJ RN	1305 ft/s +/- 30 ft/s
	.357 Magnum 158 Grain JSP	1430 ft/s +/- 30 ft/s

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of **NIJ Standard**-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
II	9MM 124 Grain FMJ RN	44mm
II	.357 Magnum 158 Grain JSP	44mm

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (I) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7X9 and 5X8 pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V-50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally, the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay-up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one inch (1").

2. The bottom edge of the front ballistic panel shall be within one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

3.1.2 Contract Item No. 2 - Level IIIA Body Armor

3.1.2.1 Level IIIA Body Armor is intended for the use by male and female officers of the agency. The vest shall be worn comfortably while being concealed under a uniform shirt. Vest shall protect against labeled projectile penetration while reducing resultant blunt trauma and vest distortion to acceptable levels. The successful vendor shall be required to supply the individual vest with applicable options and colors as ordered for male or female officers.

Vest shall be certified under the NIJ Standard-0101-06 for Bullet Resistant Body Armor Threat Level IIIA. Bids based on body armor models made by manufacturers other than Point Blank/Alpha Elite, Survival Armor/Paragon6 and Second Chance/Summit SM02 must be clearly identified. Vendors should include a male and female sample, full product description, drawings and/or photos, technical specifications, as well as a list of at least twenty five (25) law enforcement agencies currently using that model armor for reference and be available to perform a body armor demonstration (body armor shoot).

If a vendor proposes an alternate product, the vendor must demonstrate product equivalency to the satisfaction of the agency. Evidence equivalency shall be presented for each requirement of this specification and the burden of such equivalency rest entirely on the vendor. Any bidder may be required, at any time during the procurement process, to provide documentation proving compliance with any or all terms of this specification.

Only body armor models which have been tested by the National Institute of Justice (NIJ), National Law Enforcement Technology Center (NLETC) utilizing the methodology found in the NIJ Standard-0101-06 for bullet Resistant Body Armor, and found to comply with the NIJ Standard-0101-06 for Bullet Resistant Body Armor, for Level IIIA Armor shall be submitted under this specification.

Models certified under earlier standards and grandfathered into compliance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor will be rejected. Vendors must provide test results of any and all rounds that exceed NIJ Standard-0101-06 for Bullet Resistant Body Armor. This NIJ abbreviated testing is commonly known as "Special Threat" testing; testing of such rounds must be conducted by an NIJ approved laboratory.

APPLICABLE DOCUMENTS:

The following list of standards and specifications in effect on the date of this solicitation shall form a part of this specification.

1. NIJ 2005 Interim Requirement for Bullet Resistant Body Armor
2. MIL-STD-662, V50 Ballistic Test for Armor
3. Federal Standard no. 751, Stitches, seams, and stitching.
4. ISO 9001:2008 certification
5. BA 9000:2012 certification

6. ANSI/ASQC-Q9000 Quality Standard, dated August 1, 1994
7. Additional Test reports of "Special Threat Testing from a certified NIJ Laboratory as required.

PURCHASE REQUIREMENTS: The successful bidder must be a recognized wholesaler/retailer which will travel to West Virginia State Police Headquarters/Procurement Division located in South Charleston, West Virginia as well as the West Virginia State Police Academy in Institute, WV, Troop 1 Headquarters in Shinnston, WV, Troop 2 Headquarters in Kearneysville, WV, Troop 3 Headquarters in Elkins, WV and Troop 6 Headquarters in Beckley, WV for measurements, fitting and service during regular business hours Monday through Friday.

DESIGN REQUIREMENTS:

The intended use of the soft body armor detailed herein is intended to be standard issue armor. It is intended for routine daily wear as an undergarment.

The soft body armor shall be designed to provide:

1. Light and thin NIJ Standard-0101-06 for Bullet Resistant body armor in Level IIIA
2. A high degree of concealment and comfort.
3. Minimum restriction of motion or mobility.
4. Optional carriers to allow for laundering and color changes.
5. Provide protection against the labeled projectiles in accordance with the NIJ Standard-0101-06 for Bullet Resistant Body Armor.

GENERAL DESIGN:

The ballistic panels of soft body armor meeting this specification shall provide thin, flexible, lightweight comfort utilizing a matrix of two or more of the following. Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s), with the exception to tack at the panel's edges. The soft body armor shall be designed for regular daily wear as an undergarment. Therefore, vest shall be designed and constructed to provide (1) light and thin NIJ Standard-0101-06 for Bullet Resistant Body Armor certified armor in Level IIIA, (2) durability (3) ease of cleaning, (4) minimum restriction of motion or mobility and (5) the greatest amount of ballistic coverage consistent with comfort and concealment.

The general configuration shall be the slipover vest type that covers the majority of the upper torso, including side coverage. Availability for four or six elastic straps with hook and pile fasteners shall provide proper positioning and comfort. The entire vest perimeter shall be curved. No sharp corners or straight edges shall be allowed.

The front ballistic panel shall cover the chest approximately up to the collar bone and maintain concealment when wearing an open collar shirt, extend downward to the waist but not far enough to "push up into the throat" when the wearer is seated, and extend around the sides to provide side protection. The biceps/chest area shall be cut with sufficient space to minimize irritation and restriction of arm movement during common duties such as the operation of a motor vehicle.

The rear ballistic panel shall cover the back of the torso from just above the shoulder blades down to a position above the waist belt. The sides of the torso shall be covered by having side coverage from both the front and rear panels, as the department has determined that such a configuration maximizes both coverage and comfort. Accordingly, armor which maintains side coverage from only the front and rear panels ***will be rejected.***

Panels and carriers shall be equipped with an internal suspension system, which prevents ballistic panels from sagging, ensuring full protection.

Each piece of soft body armor shall include the following:

1. One (1) set of ballistic panels (1 front, 1 rear)
2. Two (2) complete washable concealable carriers OD Green in color or pre-approved color.
3. One (1) 5"x 8" soft trauma plate.
4. One (1) 5"x 8" level IIIA special threat plate

OPTIONS:
The following will be optional equipment that can be purchased:

1. Tactical outer carrier
2. Concealable washable carrier
3. Gunshot medical kit to include one tourniquet, one wound packing Gauze or Quikclot Combat Gauze or equal, duct tape, two occlusive dressings and one pair of nitrile gloves. The gunshot medical kit will be deployed from an integrated deployment pouch out of the concealable carrier or from a retrofit pouch that attaches to the concealable carrier.

BALLISTIC PANEL MATERIALS

All materials shall be new, unused and without flaws that affect appearance, durability and function. The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. As the agency has selected these materials, any bids which represent products manufactured from other materials shall be approved prior to an award of the contract. Agency has final decision without an appeal process for their decision.

PANEL CONSTRUCTION:

The ballistic panels shall be constructed of a matrix of two or more of the following: Honeywell Spectra Shield, Honeywell Gold Shield, Tex Tech Core Matrix Technology, Woven Aramid and Polyethylene UD fabrics and Dyneema or equal. There shall be no stitching completely through the entire ballistic panel(s) with the exception to takes at the panels edges.

All vests, which are submitted, shall represent armor, which in layer count is uniform throughout the ballistic panel. Accordingly, any ballistic panel, which is not uniform, in layer count, throughout the entire ballistic package, shall be rejected. If the manufacturer contends that such feathering of the armor is advantageous, then the armor shall be tested utilizing the least number of layers, which exist in any part of the ballistic package. Failure to submit such testing shall be cause for rejection.

It is the intent of the agency to procure the lightest weight, best performing personal armor available in relation to areal density, therefore a vest section of 12"x 12" (one square foot) (30.5 cm X 30.5 cm) must not exceed the following:

Threat Level	Maximum Weight	Maximum Thickness
IIIA	1.05 lbs. sq. ft.	.25 inches

BALLISTIC PANEL PERFORMANCE

V50 Performance

Each bidder shall submit V50 Test reports for the vest being offered. The V50 test reports for the vest being offered. The V50 test shall be

performed in accordance with MIL-STD-662F using NIJ Standard-0101-06 for Bullet Resistant Body Armor .357 Sig 125 grain FMJ FN and .44 Magnum 240 grain SJHP test projectiles. The test must be performed by an independent laboratory approved by the National Institute of Justice (NIJ) Laboratory approved by the National Institute of Justice (NIJ) National Law Enforcement technology Center (NLETC) for testing in accordance with NIJ Standard-0101-06 for Bullet Resistant Body Armor. Models grandfathered into compliance with NIJ Standard-0101-06 will be rejected. The vest must be tested under protocol contained in the new NIJ Standard-0101-06 for Bullet resistant Body Armor. The V50 test shall be against clay backing. V50 reports which represent testing without clay backing shall be rejected. Vendor shall provide written certification that all V 50 testing is accomplished with clay backing. Failure to provide certification shall be cause for rejection.
Test reports submitted by the bidder shall reflect the following ***minimum test results.***

Threat Level	Bullet Description	V50 Velocity (Minimum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**1470 ft/s +/- 30 ft/s**
IIIA	**.44 Magnum 240 Grain SJHP**	**1430 ft/s +/- 30 ft/s**

Relative Performance Index (RPI) It has been determined that the relative strength to weight ratio of a ballistic design is important in determining its comfort/performance characteristics. The strength to weight ratio is calculated by dividing the areal weight (lbs. per square foot) into the performance V50 value. A high strength to weight ratio or Relative Performance Index (RPI) indicates a high degree of comfort & performance. Therefore, the minimum RPI shall be no lower than:

Threat Level	Bullet Description	Relative Performance Index (RPI Minimum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**1470 ft/s +/- 30 ft/s**
IIIA	**.44 Magnum 240 Grain SJHP**	**1430 ft/s +/- 30 ft/s**

Trauma Performance (BFS)

Blunt Trauma reduction is an important aspect of armor design. Low back face signature (BFS) should result in reduced blunt trauma injury. Therefore, the back face signature results of NIJ Standard-0101-06 for Bullet Resistant Armor certification test reports shall reflect BFS no higher than:

Threat Level	Bullet Description	Back Face Signature (BFS Maximum)
IIIA	**.357 Sig 125 Grain FMJ FN**	**44mm**
IIIA	**.44 Magnum 240 Grain SJHP**	**44mm**

Bid submissions which do not meet this requirement, will be rejected.

LABELING

Label material shall withstand normal wear and cleaning and remain readable during the entire warranted life of the armor or carrier.

All soft body armor shall be labeled in strict adherence to the labeling requirement set forth in NIJ Standard-0101-06 for Bullet Resistant Body Armor. The ballistic panel labeling shall include, but not be limited to the following:

1. Name of Manufacturer
2. Level of Protection
3. NIJ Standard-0101-06 for Bullet Resistant Body Armor
4. Date of fabrication
5. Size
6. Serial Number
7. Model of Vest
8. Care instructions
9. Lot number

BALLISTIC PANEL COVER MATERIAL

Each ballistic panel shall be covered in 100% weldable Nylon 210D double wall rip stop with TPU coating or dual covered 2 ply 70 denier textured nylon ripstop and TPU lamination system or equal. Inner cover material must be stain-resistant, odor and mildew resistant. Material shall have no visible fabric or color flaws.

VEST OUTER CARRIER MATERIAL

Removable carrier-ns-carrier

The outer machine washable carrier shall be removable from the ballistic panels for laundering by way of zippers or Velcro integrated into the outside of the garment. Carrier shall come with fixed waist and shoulder straps. Carrier shall come with (1) set of straps. Outer vest material shall be poly-cotton or micro mini-rip or pre-approved equal. The inner carrier material shall be Akwadyne Mesh or equal. Male and female carriers shall have both a 7"x9" and 5"x8" pockets on the front and rear of the carrier. All fabrics shall have no visible fabric or color flaws.

TRAUMA INSERT

A trauma reduction insert constructed of bullet resistant material cut five inch by eight inch shall be provided. The trauma reduction insert shall be placed in a sealed nylon cover.

QUALITY CONTROL

The manufacturer must maintain a quality program certified under the ISO 9001 certification program by an accredited registrar under the accreditation of the Registrar Accreditation Board. The scope of the certification must include the Design and Manufacturing of technologically advanced personal safety equipment including concealable and tactical bullet resistant vests, custom body armor, composite armor, explosive ordinance protection, ballistic face and head protection, ballistic shields and other police and military apparel, and narcotic identification systems.

The documented quality control system must be designed to insure the integrity and quality of the manufactured products. The quality control system shall control all manufacturing process and incoming raw materials. The manufacturer must have an in-house ballistic laboratory capable of performing ballistic testing of incoming raw materials and in-process samples. The manufacturer must have the capability of performing testing in accordance with MIL-STD-662 and NIJ Standard-0101-06 for Bullet Resistant Body Armor. Procedures for lot testing of incoming raw materials and in process samples must be incorporated into the quality control system. All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662. Every vest panel manufactures shall be subsequently inspected for proper ballistic panel stitching. Covers and accessories shall be re inspected during manufacturing for defects at selected points during manufacturing to assure the absence of hidden defects in the final item.

In addition, each vest shall receive a final inspection prior to shipment. This inspection shall include a review of the quality control check sheet and confirm the product against the customer's order.

A copy of the Certificate of Accreditation, as well as the manufactures quality control program must be submitted prior to the award.

SERIAL NUMBERS

Each unit of soft body armor delivered shall have an individual serial number and shall be traceable to its original ballistic material mill roll number. Additionally the soft body armor serial number shall be traceable to an incoming material lot test and ballistic panel lay up lot test. The vendor must have the ability to trace serial numbers.

LOT TESTING

All incoming ballistic material shall undergo V50 ballistic lot test in accordance with MIL-STD-662F except that the test will be conducted on clay backing which meets the requirements of NIJ Standard-0101-06 for Bullet Resistant Body Armor for backing material.

MEASUREMENT AND FITTING

Unless otherwise stated, individual measurements will be taken of each user. Each delivered vest shall fit in accordance with the following guidelines:

1. The side edges of the front and back ballistic panels shall overlap a minimum of one (1) inch on each side.

2. The bottom edge of the front ballistic panel shall be with one inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

3. The bottom edge of the front ballistic panel shall be within one-inch (1") of the highest waist belt (usually the duty belt) measurement when the wearer is in a relaxed seated position.

4. Female sizes are determined based on individual measurements including bust size and are conformed through the use of sizing/fit samples in conjunction with a tape measure and a certified Size Right Program.

The selected bidder must have a manufacturer armor-sizing program that utilizes certified representatives and distribution-trained personnel to properly size armor.

FIT AND ALTERATION POLICY

The manufacturer shall perform all required alterations 30 days after the original shipment of the product at no charge.

PRODUCT LIABILITY INSURANCE

Vest manufacture shall agree to provide a minimum of $20,000,000.00 product liability insurance coverage on delivered vest.

WARRANTY Ballistic Panels: For five (5) years after the date of purchase the manufacture will warrant the ballistic panels against defects in materials and workmanship.

The alteration of ballistic panels by anyone other than the manufacturer in any way shall render the warranty void.

REMOVABLE COVERS:

Removable machine washable covers shall be fully warranted for twelve (12) months after the date of purchase against any defects in the material and /or workmanship.

PACKAGING

All soft body armor shall be packaged and shipped consistent with good commercial practices.

Plastic Bags: Each set of armor, along with its optional equipment shall be placed in an individual plastic bag.

Shipping Cartons: The soft body armor shall be packed into suitable corrugated cardboard box. The box shall allow for normal shipping without damage to the soft body armor.

DOCUMENTATION

The following documents, certifications, test-reports and samples must be provided.

1. Models must be clearly identified and shall include:

    a. Full product description
    b. Complete bid sample, male and female
    c. Drawings and/or photographs
    d. Technical specifications

2. Manufacturers bidding direct must provide a service proposal as to how measuring, alterations and customer service will be maintained without local distribution.

3. Compliance with NIJ Standard-0101-06 for bullet Resistant Body Armor and test reports from an accredited laboratory for the vest being certified under the NIJ 2005 Interim Requirement and not grandfather in under earlier standards.

a. Any ballistic rounds tested above and beyond the required NIJ Standard-0101-06 for Bullet Resistant body Armor standard for requested threat level requires a report from a NIJ Certified Laboratory. Any Bidder that does not provide such documentation will be rejected.

4. V50 test reports performed in accordance with MIL-STD-662F. V50 testing must be accomplished with clay backing.

NIJ Standard-0101-06

a. Test Reports must be submitted for the entire ballistic package.

b. Test reports must be submitted for incoming materials, which are utilized in the ballistic package.

5. Chemical test reports certifying use of Akwadyne or equal fabric treatment

6. The ability to trace serial numbers.

7. The layer count of the vest must be uniform throughout the entire ballistic package. If not, test reports must be submitted for the vest utilizing the least amount of layers.

8. Quality Control Procedures a. Incoming materials b. Lay-up configuration c. In-process configuration d. Testing verification e. Inspection of ballistic panel stitching f. Random final product inspection and continuous in-process surveillance.

9. Product Liability Insurance providing a minimum coverage of $20,000,000.

10. Documentation stating a 5-year ballistic passage warranty

11. Documentation stating a 12-moth cover warranty

12. ISO-9001 Certificate

National Institute of Justice (NIJ) 0101-06 are attached to this document.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 Pricing Pages: Vendor should complete the Pricing Pages by [completing unit price, extended price and total as well as all vendor information]. Vendor should complete the Pricing Pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Pages contain a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor should type or electronically enter the information into the Pricing Pages to prevent errors in the evaluation.

5. ORDERING AND PAYMENT:

5.1 Ordering: Vendor shall accept orders by regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Any on-line ordering system must have the capability to restrict prices and available items to conform to the Catalog originally submitted with this RFQ. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

5.2 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1 Delivery Time: Vendor shall deliver standard orders within 60 working days after orders are received. Vendor shall ship all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met.

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3 Delivery Payment/Risk of Loss: Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all

emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.

6.4 **Return of Unacceptable Items:** If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

6.5 **Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7. MISCELLANEOUS:

7.1 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the RFQ unless a contract modification is approved in accordance with the provisions contained in this Contract.

7.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.

7.3 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

7.4 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Mike Amory
Telephone Number: 304-925-0305
Fax Number: 304-925-3648
Email Address: m2@modernguns.net

Rev. 04/14

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. **Application is made for 2.5% vendor preference for the reason checked:**

___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. **Application is made for 5% vendor preference for the reason checked:**

___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

✓ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules*.**

✓ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Mike Amory **Signed:** _____

Date: 01/05/2015 **Title:** Operations Manager

CERTIFICATE OF LIABILITY INSURANCE 10/26/2014

DATE (MM/DD/YYYY) 1/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	Lockton Companies, LLC-1 Kansas City 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000
CONTACT NAME:	
PHONE (A/C, No, Ext):	FAX (A/C, No):
E-MAIL ADDRESS:	

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : American Guarantee and Liab. Ins. Co.	26247
INSURER B : Zurich American Insurance NAIC 16535	
INSURER C : HDI-Gerling America Insurance Company	41343
INSURER D :	
INSURER E :	
INSURER F :	

INSURED 1359574	JAGENBERG AG, KREFELD SURVIVAL ARMOR INC ATTN: BOBBIE SUE EPRIGHT 12621 CORPORATE LAKES DR UNIT 8 FORT MYERS FL 33913

COVERAGES CERTIFICATE NUMBER: 12662075 REVISION NUMBER: XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
C	GENERAL LIABILITY	N	N	GLD10691-06	1/1/2014	1/1/2015	EACH OCCURRENCE	$ 1,000,000
	[X] COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 50,000
	[ ] CLAIMS-MADE [X] OCCUR						MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PRODUCTS - COMP/OP AGG	$ Excluded
	[X] POLICY [ ] PRO-JECT [ ] LOC							$
A	AUTOMOBILE LIABILITY	N	N	BAP4882809-05	10/26/2013	10/26/2014	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[ ] ANY AUTO						BODILY INJURY (Per person)	$ XXXXXXX
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$ XXXXXXX
	[X] HIRED AUTOS [X] NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$ XXXXXXX
								$ XXXXXXX
	[ ] UMBRELLA LIAB [ ] OCCUR			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	[ ] EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ XXXXXXX
	[ ] DED [ ] RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		N	WC4882810-05	10/26/2013	10/26/2014	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [N] N/A (Mandatory in NH)						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES /(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

12662075

THE DE NIJS GROUP
891 GOSFIELD GATE COURT
WESTERVILLE OH 43081

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF. NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Ronald J. Lofton

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ACORD

CERTIFICATE OF LIABILITY INSURANCE

10/26/2014

DATE (MM/DD/YYYY) 1/3/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

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INSURER(S) AFFORDING COVERAGE	NAIC #
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INSURER B : Zurich American Insurance NAIC 16535	
INSURER C : HDI-Gerling America Insurance Company	41343
INSURER D :	
INSURER E :	
INSURER F :	

INSURED	JAGENBERG AG, KREFELD 1359574 SURVIVAL ARMOR INC ATTN: BOBBIE SUE EPRIGHT 12621 CORPORATE LAKES DR UNIT 8 FORT MYERS FL 33913

COVERAGES CERTIFICATE NUMBER: 12662075 REVISION NUMBER: XXXXXXX

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INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
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	[ ] CLAIMS-MADE [X] OCCUR						MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	[X] POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ Excluded
A	AUTOMOBILE LIABILITY	N	N	BAP4882809-05	10/26/2013	10/26/2014		$
	[ ] ANY AUTO						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	[ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS						BODILY INJURY (Per person)	$ XXXXXXX
	[X] HIRED AUTOS [X] NON-OWNED AUTOS						BODILY INJURY (Per accident)	$ XXXXXXX
							PROPERTY DAMAGE (Per accident)	$ XXXXXXX
	[ ] UMBRELLA LIAB [ ] OCCUR							$ XXXXXXX
	[ ] EXCESS LIAB [ ] CLAIMS-MADE			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	[ ] DED [ ] RETENTION $						AGGREGATE	$ XXXXXXX
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		N	WC4882810-05	10/26/2013	10/26/2014		$
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] N/A						[X] WC STATU-TORY LIMITS [ ] OTH-ER	
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES /(Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

12662075

THE DE NIJS GROUP
891 GOSFIELD GATE COURT
WESTERVILLE OH 43081

CANCELLATION

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AUTHORIZED REPRESENTATIVE

Ronald J. Foster

ACORD 25 (2010/05)

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U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

September 13, 2012

Larry McCraney
President
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-II
NIJ Compliance Status Expires: September 13, 2017

Dear Mr. McCraney:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

All compliance requirements, as identified by the *NIJ Body Armor Compliance Testing Program Administrative Manual* and the *Ballistic Body Armor Applicant Package*, must be maintained as long as the NIJ Statement of Compliance is displayed on this armor model's labels. If, at any time, the compliance status of this armor model is changed, the NIJ Statement of Compliance shall cease to be used as of the date of the status change.

Sincerely,

Michael K O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

Intertek

Certificate of Registration

This is to certify that the quality management system of

Survival Armor Inc.

Main Site: 12621 Corporate Lakes Drive, Unit 8, Fort Myers, Florida, 33913, USA

has been assessed and registered by Intertek as conforming to the requirements of

ISO 9001:2008

The quality management system is applicable to:

The design, development and manufacturing of body armor.

Intertek Testing Services NA, Inc. – Boxborough, MA, USA

Certificate Number: **QMS-0276b**

Certificate Issue Date: 20 March 2012
Certificate Expiry Date: 20 March 2015

In the issuance of this certificate, Intertek assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with Intertek's requirements for systems certification. Validity may be confirmed online at www.intertek.com/systems-certification.

PERRY JOHNSON REGISTRARS, INC.

Certificate of Registration

Perry Johnson Registrars, Inc., has audited the Quality Management System of:

Survival Armor

12621 Corporate Lakes Drive, Unit 8, Fort Myers, FL 33913 United States

(Hereinafter called the Organization) and hereby declares that Organization is in conformance with:

ISO 9001:2008/BA 9000:2012

This Registration is in respect to the following scope:

Design, Development and Manufacture of Body Armor

This Registration is granted subject to the system rules governing the Registration referred to above, and the Organization hereby covenants with the Assessment body duty to observe and comply with the said rules.

PERRY JOHNSON REGISTRARS, INC.

ANAB ACCREDITED

Terry Boboige, President

Perry Johnson Registrars, Inc. (PJR)
755 West Big Beaver Road, Suite 1340
Troy, Michigan 48084
(248) 358-3388

The validity of this certificate is dependent upon ongoing surveillance.

Effective Date:	Expiration Date:	Certificate No.:
October 15, 2014	October 14, 2017	C2014-02575

SURVIVAL ARMOR

Limited Warranty

Your vest is made up of two elements: (1) the protective panels, containing the ballistic and/or stab-resistant panels in a permanent protective cover and (2) a removable outer carrier. This vest is warranted to be free of defects in material and workmanship for the applicable warranty period, subject to the limitations listed below.

The warranty period for the carrier is 18 months from the date of purchase. The warranty period for the protective panels is 5 years from the date of purchase.

Carrier warranty excludes open seams or broken stitches that occur after delivery. Our warranties extend to the original user or purchaser only. This warranty is voided if the maintenance or care as stated on the protective panels label and enclosed instructions have not been followed or if the product has been altered in any manner by anyone other than Survival Armor. Since a coordinated protective panel and carrier are essential for proper protection, use of a carrier outer shell not produced or approved by Survival armor nullifies the warranty. To qualify for warranty coverage, you must (a) complete and mail the attached warranty card within 30 days of receipt of your vest, (b) if a warranty issue then return the entire vest to the Survival Armor in Ft. Myers at: 13881 Plantation Road, International Unit #8, Fort Myers, FL 33912 Attn: Returns, within the applicable warranty period, and (c) include the vest with carriers with the reasons for returning in writing.

If a warranty claim is made and Survival Armor determines that it is a valid warranty claim, then in its discretion Survival Armor will repair or replace the defective component. This limited warranty does not cover any claim or warranty made by a reseller or anyone else beyond the provisions of the warranty. This warranty is in lieu of all other warranties, express or implied, including without limitation any warranties of merchantability or fitness for a particular purpose, which are expressly disclaimed.

The buyer agrees that its sole and exclusive remedy against Survival Armor will be limited to the repair or replacement of defective parts, provided that the buyer complies with all instructions and directions regarding the vest or its components. No partial or full refund to the purchase price will be provided. This exclusive remedy will not be deemed to have failed of its essential purpose so long as Survival Armor is willing to repair or replace a defective part in any manner that allows the product to be worn and meet the performance criteria for the balance of the warranty period. Survival Armor will not be liable to buyer and disclaims any liability for any incidental, consequential or special damages to the maximum extent permitted by any applicable state law warnings.

Each protective panel label lists the applicable standard to which it was certified. The protective panels were designed to stop the specific threats used in the protocol for this certification. The protective panel only offers protection on the areas it covers, and cannot cover areas it does not cover. The outer carrier offers no ballistic protection. Protective panels only protect when properly inserted into the carrier with the strike face out and the body side against the body. Always insert the protective panels as described in the materials enclosed with your body armor. Proper care of the protective panels and carrier is essential to maintaining the comfort and performance of the vest. Always follow the instructions for care and maintenance that came with the vest.

Survival Armor disclaims liability for consequential damages for breach of any express or implied warranty, including any implied warranty or merchantability and fitness for particular purpose. The laws of your state may impose different requirements.

A member of the VERSEIDAG PROTECTION GROUP

13881 Plantation Road – International Center I, Unit 8 - Fort Myers, FL 33912
Phone: 866.868.5001 Fax: 239.210.0898 Web: www.survivalarmor.com

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems-Wichita Division
Report Identification Number: 14N015
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002340
Manufacturer: Survival Armor

Report Date: 08/29/14
NIJ Armor Type: 3A

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1			Size: C-5					Sample 2			Size: C-5				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1476	0	27.42		1480	0	25.55		1474	0	25.71		1483	0	25.28	
2	1464	0	26.38		1457	0	27.31		1498	0	27.48		1472	0	26.48	
3	1469	0	30.03		1469	0	28.67		1495	0	28.17		1509	0	25.93	
4	1480	0		g	1488	0			1492	0		g	1479	0		
5	1455	0		g	1475	0			1470	0		g	1473	0		
6	1474	0			1471	0			1487	0			1504	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 30 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 27.03 mm
St. Dev: 1.42549 mm

	Sample 3			Size: C-1					Sample 4			Size: C-1				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1452	0	25.34		1476	0	27.24		1477	0	26.95		1472	0	26.64	
2	1491	0	28.59		1500	0	27.88		1480	0	26.94		1472	0	26.46	
3	1466	0	26.73		1493	0	28.96		1475	0	28.14		1469	0	26.81	
4	1478	0		g	1478	0			1480	0		g	1473	0		
5	1446	0			1478	0			1479	0			1486	0		
6	1446	0			1480	0			1490	0			1490	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 29 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 27.22 mm
St. Dev: 1.00881 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1430 ± 30 ft/s **Conditioning:** New

	Sample 5			Size: C-5					Sample 6			Size: C-5				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1431	0	35.79		1416	0	35.46		1428	0	36.31		1413	0	36.53	
2	1441	0	32.46		1416	0	34.1		1419	0	35.66		1404	0	34.2	
3	1414	0	36.28		1409	0	34.41		1405	0	35.7		1425	0	35.74	
4	1410	0			1406	0			1422	0			1413	0		
5	1406	0			1410	0			1412	0			1436	0		
6	1418	0			1421	0			1431	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 35.22 mm
Maximum BFS: 36.5 mm St. Dev: 1.19367 mm
Pass - No BFS greater than 44 mm

	Sample 7			Size: C-1					Sample 8			Size: C-1				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1426	0	35.82		1409	0	36.47		1431	0	37.75		1421	0	36.49	
2	1431	0	36.3		1407	0	35.22		1405	0	34.53		1428	0	35.12	
3	1404	0	38.07		1426	0	37.42		1422	0	36.41		1431	0	36.43	
4	1406	0		g	1406	0			1443	0			1410	0		
5	1411	0			1413	0			1408	0			1429	0		
6	1403	0			1414	0			1411	0			1422	0		
7																
8																

Summary: Perforations: 0 (Pass) BFS Statistics: Count: 12 Average: 36.34 mm
Maximum BFS: 38.1 mm St. Dev: 1.0656 mm
(Pass - No BFS greater than 44 mm)

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1424	0	26.84		1414	0	26.49		1393	0	29.48					<<Error
2	1407	0	31.69		1397	0	25.29		1409	0	27.55					<<Error
3	1409	0	27.6		1421	0	28.16		1439	0	27.79					<<Error
4	1398	0		g	1412	0			1414	0		g				<<Error
5	1393	0		g	1415	0			1416	0						<<Error
6	1396	0			1433	0			1392	0						<<Error
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 31.69 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 29.48 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1336	0	31.18		1336	0	32.8		1360	0	32.69		1358	0	34.25	
2	1344	0	33.16		1357	0	35.8		1344	0	33.85		1363	0	33.83	
3	1325	0	30.1		1365	0	31.51		1338	0	33.39		1347	0	35	
4	1352	0		g	1362	0			1337	0			1341	0		
5	1340	0		g	1344	0			1354	0			1336	0		
6	1335	0			1351	0			1352	0			1341	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 35.8 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 35 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned

0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only

Maximum BFS: **38.1 mm**

This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 12.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1469	0		1458	0		1460	0		1450	0		1458	0	
2	1580	0		1569	0		1559	0		1597	0		1605	0	
3	1695	0		1710	0		1678	0		1668	0		1677	0	
4	1746	0		1749	1		1764	1		1764	0		1744	0	
5	1835	1		1696	0		1688	0		1834	0		1844	1	
6	1760	0		1747	0		1740	0		1908	1		1793	0	
7	1807	0		1782	0		1775	1		1857	0		1814	0	
8	1840	1		1843	1		1738	0		1910	0		1853	1	
9	1805	1		1805	0		1790	0		1952	0		1834	1	
10	1773	0		1837	1		1811	0		1987	0		1777	1	
11	1817	0		1765	0		1882	0		1975	1		1748	0	
12	1865	0		1796	0		1914	0		1960	1		1762	0	
13															
14															
15															

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1478	0		1454	0		1453	0		1468	0		1475	0	
2	1589	0		1592	0		1574	0		1552	0		1575	0	
3	1672	0		1685	0		1682	0		1686	0		1696	0	
4	1760	1		1774	1		1740	1		1757	0		1772	0	
5	1703	0		1697	0		1676	0		1859	1		1828	0	
6	1731	0		1740	0		1720	0		1792	0		1911	0	
7	1779	0		1756	0		1769	0		1804	0		1994	0	
8	1789	1		1802	0		1803	1		1848	1		2038	1	
9	1761	0		1848	0		1764	0		1830	0		1988	0	
10	1813	0		1886	1		1850	0		1860	1		2035	1	
11	1859	0		1841	1		1856	0		1818	1		1989	1	
12	1902	1		1814	0		1886	0		1781	0		1954	1	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	31	Acceptable
Stops (Partial Penetrations):	89	Acceptable
Perforations below 1500 ft/s:	0	Acceptable

Regression Analysis

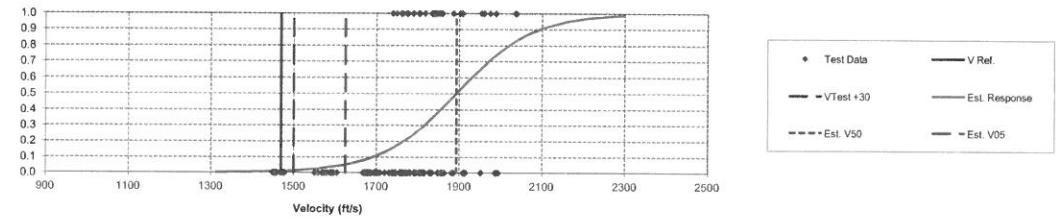
Regression Model: **Logistic**

Estimated V50: 1893 ft/s

Estimated V05: 495.2 m/s (1625) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): **0.96%** Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1410	0		1426	0		1423	0		1427	0		1420	0	
2	1516	0		1513	0		1528	0		1510	0		1521	0	
3	1621	0		1606	0		1621	0		1629	0		1628	0	
4	1707	0		1721	1		1715	1		1723	1		1710	1	
5	1788	1		1653	0		1657	0		1809	1		1650	0	
6	1750	1		1685	0		1672	0		1739	0		1687	0	
7	1668	1		1730	1		1736	1		1776	0		1725	1	
8	1615	0		1682	0		1701	1		1817	1		1695	1	
9	1642	0		1724	0		1656	1		1778	0		1650	0	
10	1675	0		1747	1		1638	0		1831	0		1682	1	
11	1702	0		1718	0		1656	0		1845	0		1656	0	
12	1756	1		1760	0		1692	0		1884	1		1688	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1414	0		1435	0		1423	0		1416	0		1418	0	
2	1518	0		1527	0		1553	0		1509	0		1516	0	
3	1624	0		1606	0		1627	0		1619	0		1615	0	
4	1720	1		1709	1		1716	0		1709	0		1733	1	
5	1658	0		1672	0		1799	0		1803	1		1660	0	
6	1689	0		1689	0		1877	1		1750	1		1700	0	
7	1730	0		1729	1		1831	1		1688	1		1725	1	
8	1775	0		1697	1		1778	1		1612	0		1686	1	
9	1785	1		1646	1		1720	0		1626	0		1663	0	
10	1764	0		1623	0		1741	0		1709	0		1690	0	
11	1797	0		1657	0		1791	0		1733	0		1732	0	
12	1827	1		1692	0		1821	0		1770	0		1773	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	35	Acceptable
Stops (Partial Penetrations):	85	Acceptable

Perforations below 1460 ft/s: 0 Acceptable

Regression Analysis

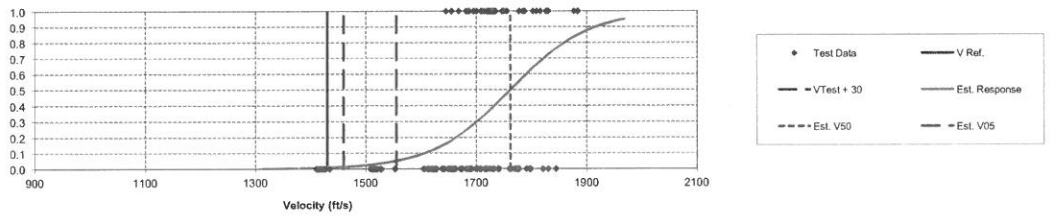
Regression Model: **Logistic**

Estimated V50: 1762 ft/s

Estimated V05: 473.9 m/s (1555) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): **0.89%** Acceptable

Test Data and Regression Model



Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1388	0		1390	0	
2	1492	0		1479	0	
3	1595	0		1628	0	
4	1711	0		1705	0	
5	1805	1		1813	0	
6	1773	0		1940	1	
7	1810	0		1842	1	
8	1837	0		1781	0	
9	1899	1		1813	0	
10	1818	1		1863	0	
11	1803	1		1907	1	
12	1760	0		1853	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	7	
Stops (PP):	17	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1843 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1358	0		1349	0	
2	1449	0		1438	0	
3	1501	0		1492	0	
4	1602	0		1602	0	
5	1708	0		1721	0	
6	1808	1		1802	0	
7	1780	0		1882	1	
8	1777	1		1821	1	
9	1777	1		1780	1	
10	1723	1		1715	0	
11	1623	0		1758	0	
12	1687	0		1780	1	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	8	
Stops (PP):	16	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1761 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditioned

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only

Threat 1: 0.96%
Threat 2: 0.89%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 12.0 / Operating System version Windows (32-bit) NT 5.01

Chesapeake TESTING

www.chesapeaketesting.com

30 October 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-124, Tested 22 and 23 October 2014, Purchase Order No. 0008796, Test Report No. CT-RD-14-1232

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 22 and 23 October 2014. This report includes a summary of the test as well as a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jem

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008796
Report No.: CT-RD-14-1232

Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P) and Ballistic Resistance Test: Job No. 2049-124, Tested 22 and 23 October 2014

Prepared by:

Craig A. Thomas
Jordan E. Mears

Chesapeake Testing

4603B Compass Point Road
Belcamp, MD 21017

27 October 2014

Further dissemination only as directed by Survival Armor, October 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

1 Introduction

Survival Armor provided 16 armor samples to Chesapeake Testing for ballistic testing on 22 and 23 October 2014. Prior to testing, the samples were sized and weighed. The results are shown in Table 1.

Table 1. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-124-1	1409295370-Front-Dry	Proprietary	2216-2216	2.53
2049-124-2	1409295370-Back-Dry	Proprietary	2216-2216	2.40
2049-124-3	1409295362-Front-Dry	Proprietary	2216-2216	2.54
2049-124-4	1409295362-Back-Dry	Proprietary	2216-2216	2.42
2049-124-5	1409295371-Front-Hot	Proprietary	2216-2216	2.54
2049-124-6	1409295371-Back-Hot	Proprietary	2216-2216	2.42
2049-124-7	140925365-Front-Tumbled-Hot	Proprietary	2216-2216	2.53
2049-124-8	140925365-Back-Tumbled-Hot	Proprietary	2216-2216	2.42
2049-124-9	1409295368-Front-Cold	Proprietary	2216-2216	2.51
2049-124-10	1409295368-Back-Cold	Proprietary	2216-2216	2.42
2049-124-11	1409295364-Front-Tumbled-Cold	Proprietary	2216-2216	2.59
2049-124-12	1409295364-Back-Tumbled-Cold	Proprietary	2216-2216	2.43
2049-124-13	1409295369-Front-Wet	Proprietary	2216-2216	2.49
2049-124-14	1409295369-Back-Wet	Proprietary	2216-2216	2.41
2049-124-15	1409295363-Front-Tumbled-Wet	Proprietary	2216-2216	2.54
2049-124-16	1409295363-Back-Tumbled-Wet	Proprietary	2216-2216	2.43

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- 9-mm NATO, 124-grain full metal jacketed (FMJ) projectiles.
- 9mm, 127-grain +P+ T-Series projectiles.
- 9-mm, 147-grain gold dot hollow point (GDHP) projectiles.
- .40-cal., 180-grain S&W Speer GDHP projectiles.
- .45 Auto, 230-grain brass jacketed hollow point (BJHP) projectiles.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Some projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount while others were fired from a pistol.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A).

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with FBI Test Protocol Version 4.1, dated 22 May 2014 and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with FBI Test Protocol Version 4.1. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (66 ±2 °F).

The samples were conditioned prior to testing as denoted in the Sample No. and on the data sheets. For each shot, the target was strapped to a gelatin block that was attached to a rigid test fixture. All firings were conducted at 17.200 ft from the target unless otherwise noted. The projectile velocities used for the test were in accordance with the referenced performance standard.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round data sheets for all ballistic resistance testing performed are presented on the following pages.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-1	1409295370-Front-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1422	None
				3	1432	None
				4	1430	None
				5	1425	None
				6	1427	None
				7	1440	None
				8	1431	None
2049-124-2	1409295370-Back-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1436	None
				2	1442	None
				3	1453	None
				4	1446	None
				5	1410	None
				6	1408	None
				7	1410	None
				8	1418	None

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-3	1409295362-Front-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1412	None
				3	1422	None
				4	1410	None
				5	1433	None
				6	1428	None
				7	1426	None
				8	1436	None
2049-124-4	1409295362-Back-Dry	0.0	9-mm NATO, 124-grain FMJ	1	1436	None
				2	1445	None
				3	1437	None
				4	1437	None
				5	1437	None
				6	1432	None
				7	1431	None
				8	1437	None

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-5	1409295371-Front-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1408	None
				2	1422	None
				3	1410	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None
2049-124-6	1409295371-Back-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1417	None
				2	1434	None
				3	1431	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-7	140925365-Front-Tumbled-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1442	None
				2	1430	None
				3	1435	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None
2049-124-8	140925365-Back-Tumbled-Hot	0.0	9-mm NATO, 124-grain FMJ	1	1419	None
				2	1425	None
				3	1429	None
			9-mm, 147-grain GDHP	4	NR[a]	None
			.40-cal., 180-grain S&W Speer GDHP	5	NR[a]	None
			.45 Auto, 230-grain BJHP	6	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-9	1409295368-Front-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1430	None
				3	1419	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-10	1409295368-Back-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1447	None
				2	1437	None
				3	1450	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-11	1409295364-Front-Tumbled-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1449	None
				2	1436	None
				3	1450	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None
2049-124-12	1409295364-Back-Tumbled-Cold	0.0	9-mm NATO, 124-grain FMJ	1	1453	None
				2	1447	None
				3	1431	None
			9mm, 127-grain +P+ T-Series	4	NR[a]	None

[a] Contact shot; no velocity reading was obtained

Table 2. Summary of Ballistic Resistance Test Results (continued)

Job No.	Sample No.	Target Obliq. (deg)	Threat	Shot No.	Penetration Data	
					Velocity (ft/s)	Result
2049-124-13	1409295369-Front-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1418	None
				2	1417	None
				3	1429	None
2049-124-14	1409295369-Back-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1450	None
				2	1431	None
				3	1445	None
2049-124-15	1409295363-Front-Tumbled-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1444	None
				2	1428	None
				3	1437	None
2049-124-16	1409295363-Back-Tumbled-Wet	0.0	9-mm NATO, 124-grain FMJ	1	1424	None
				2	1447	None
				3	1449	None

[a] Contact shot; no velocity reading was obtained

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-1
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295370-Front-Dry

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.53 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block		Temp: 66.9 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 56.3%
Condition: Dry	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3511	1424	3043	1424	1424	None	(a)
2	1	3517	1422	3048	1422	1422	None	(a)
3	1	3492	1432	3026	1432	1432	None	(a)
4	1	3496	1430	3030	1430	1430	None	(b)
5	1	3508	1425	3040	1425	1425	None	(b)
6	1	3504	1427	3037	1427	1427	None	(b)
7	1	3473	1440	3009	1440	1440	None	(c)
8	1	3495	1431	3029	1431	1431	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-2
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295370-Back-Dry

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block		Temp: 67.1 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 56%
Condition: Dry	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3482	1436	3018	1436	1436	None	(a)
2	1	3468	1442	3006	1441	1442	None	(a)
3	1	3442	1453	2983	1453	1453	None	(a)
4	1	3458	1446	2997	1446	1446	None	(b)
5	1	3545	1410	3072	1410	1410	None	(b)
6	1	3550	1408	3077	1408	1408	None	(b)
7	1	3547	1410	3074	1410	1410	None	(c)
8	1	3525	1418	3055	1418	1418	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-3
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295362-Front-Dry

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.54 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	67.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	54.8%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 days)/Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3512	1424	3044	1423	1424	None	(a)
2	1	3542	1412	3069	1412	1412	None	(a)
3	1	3516	1422	3047	1422	1422	None	(a)
4	1	3546	1410	3073	1410	1410	None	(b)
5	1	3488	1433	3023	1433	1433	None	(b)
6	1	3503	1427	3035	1428	1428	None	(b)
7	1	3506	1426	3038	1426	1426	None	(c)
8	1	3482	1436	3018	1436	1436	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-4
Test Date: 10/22/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295362-Back-Dry

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.42 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	66.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	56.1%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 days)/Dry	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3483	1436	3018	1436	1436	None	(a)
2	1	3459	1446	2998	1445	1445	None	(a)
3	1	3480	1437	3016	1437	1437	None	(a)
4	1	3480	1437	3016	1437	1437	None	(b)
5	1	3479	1437	3014	1438	1437	None	(b)
6	1	3492	1432	3026	1432	1432	None	(b)
7	1	3495	1431	3029	1431	1431	None	(c)
8	1	3479	1437	3015	1437	1437	None	(c)

Remarks:
Calibration of gelatin block: 3.46 in, Velocity: 586 ft/s on 22 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Dry test.
(b) Multiple round test (No smoothing).
(c) Edge test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-5
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295371-Front-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.54 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.5 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.7%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3553	1407	3076	1409	1408	None	(a)
2	1	3517	1422	3045	1423	1422	None	(a)
3	1	3548	1409	3072	1410	1410	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-6
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295371-Back-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.42 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.7%
Condition:	+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3531	1416	3057	1417	1417	None	(a)
2	1	3489	1433	3021	1434	1434	None	(a)
3	1	3496	1430	3027	1431	1431	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-7
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 140925365-Front-Tumbled-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.53 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.2 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Speer KK17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3468	1442	3003	1443	1442	None	(a)
2	1	3499	1429	3029	1431	1430	None	(a)
3	1	3485	1435	3017	1436	1435	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-8
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 140925365-Back-Tumbled-Hot

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.42 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	60.8%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /+140 for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain GDHP	Speer D17R35	Factory load
(3) .40-cal., 180-grain S&W Speer GDHP	Speer D26U34	Factory load
(4) .45 Auto, 230-grain BJHP	Remington K17 NC25R	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3526	1418	3052	1420	1419	None	(a)
2	1	3511	1424	3040	1425	1425	None	(a)
3	1	3501	1428	3031	1430	1429	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)
5	3	NR	NR	NR	NR	NR	None	(c)
6	4	NR	NR	NR	NR	NR	None	(d)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Hot test
(b) Contact shot at G1 location, Average velocity: 1136 ft/s
(c) Contact shot at G2 location, Average velocity: 973 ft/s
(d) Contact shot at G3 location, Average velocity: 802 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-9
Test Date: 10/23/2014

Test Panel — **Description:** Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor — **Sample No.:** 1409295368-Front-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.51 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.4 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 61.7%
Condition: -40 °F for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3512	1424	3041	1425	1424	None	(a)
2	1	3499	1429	3029	1431	1430	None	(a)
3	1	3526	1418	3053	1419	1419	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-10
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295368-Back-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/20/2014
Thickness: NA	Weight: 2.42 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block		Temp: 64.9 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 29.7 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 58.7%
Condition: -40 °F for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9mm, 127-grain +P+ T-Series	Federal Winchester Ranger 60HB52	Accurate No. 2 Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2993	1448	1447	None	(a)
2	1	3482	1436	3015	1437	1437	None	(a)
3	1	3450	1449	2986	1451	1450	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-11
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295364-Front-Tumbled-Cold

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.59 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test Protocol Version 4.1	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 64.2 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 54.3%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /-40 F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Matt Settle
		Recorder: Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3453	1448	2990	1449	1449	None	(a)
2	1	3483	1436	3016	1437	1436	None	(a)
3	1	3449	1450	2986	1451	1450	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-12
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295364-Back-Tumbled-Cold

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.43 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.0 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58.3%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) /-40 F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9mm, 127-grain +P+ T-Series	Winchester Ranger 60HB52	Factory load

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2981	1454	1453	None	(a)
2	1	3458	1446	2994	1447	1447	None	(a)
3	1	3496	1430	3027	1431	1431	None	(a)
4	2	NR	NR	NR	NR	NR	None	(b)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Cold test
(b) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-13
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295369-Front-Wet

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.49 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.4 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.6%
Condition:	Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3527	1418	3053	1419	1418	None	(a)
2	1	3530	1416	3057	1417	1417	None	(a)
3	1	3501	1428	3031	1430	1429	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-14
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295369-Back-Wet

Size:	2216-2216	Heat No.:	NA	Date Received:	10/20/2014
Thickness:	NA	Weight:	2.41 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.3%
Condition:	Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3449	1450	2986	1451	1450	None	(a)
2	1	3495	1431	3026	1432	1431	None	(a)
3	1	3461	1445	2997	1446	1445	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-15
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295363-Front-Tumbled-Wet

Size:	2216-2216	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	2.54 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.9 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.1%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3464	1443	2999	1445	1444	None	(a)
2	1	3502	1428	3032	1429	1428	None	(a)
3	1	3481	1436	3014	1438	1437	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-124-16
Test Date: 10/23/2014

Test Panel

Description: Proprietary; Model No.: LW-FEM-IIIA; Lot No.: 8031

Manufacturer: Survival Armor

Sample No.: 1409295363-Back-Tumbled-Wet

Size: 2216-2216	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 2.43 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI Test Protocol Version 4.1	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Gelatin block			Temp:	64.2 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	55.3%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 (12 Days) Submerged in water for 14 to 24 hours.	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Matt Settle
				Recorder:	Brad Shaffer

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3513	1423	3041	1425	1424	None	(a)
2	1	3456	1447	2992	1448	1447	None	(a)
3	1	3453	1448	2990	1449	1449	None	(a)

Remarks:
Calibration of gelatin block: 3.63 in, Velocity: 578 ft/s on 23 October 2014.
Required velocity of 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Wet test.

SURVIVAL ARMOR PROPRIETARY INFORMATION

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13079
Test Date: 06/12/13
Customer: Survival Armor

Test Conditions

Temperature: 74 °F.
Humidity: 58 %
Clay Block No.: 8
Clay Temp.: 98.3 °F.
Drop (Avg.): 20.62 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.34 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Front	1.49	Dry	0	1	1	9mm	50 / USM49mm	274.2	2089	27.70
LW-II	Front	1.49	Dry	0	2	2	9mm	50 / USM49mm	279.8	2047	27.70
LW-II	Front	1.49	Dry	0	3	3	9mm	50 / USM49mm	274.2	2089	29.36
LW-II	Front	1.49	Dry	45	4	4	9mm	50 / USM49mm	264.7	2164	No Perforation
LW-II	Front	1.49	Dry	30	5	5	9mm	50 / USM49mm	278.9	2054	No Perforation
LW-II	Front	1.49	Dry	0	6	6	9mm	50 / USM49mm	272.2	2104	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.0" - 2.75"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Liberty Ammunition Ultra Defense, 9mm+P 50 gr. USM49mm Ultra Fragmentation @ Factory Velocity

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: Paragon
Panel Side: Front
Serial No.: 223484
Lot No.: 6590
Size: 2014
Weight (lbs.): 1.49
DoM: 6/7/2013
Threat Level: II

Sample Description:

No sample description per customer request.

Crawford/Wilson

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13081
Test Date: 06/11/13
Customer: Survival Armor

Test Conditions

Temperature: 73 °F.
Humidity: 48 %
Clay Block No.: 8
Clay Temp.: 98.5 °F.
Drop (Avg.): 20.83 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.34 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Front	1.88	Dry	0	1	1	.45 Cal.	78 / USM45	299.7	1911	30.30
LW-II	Front	1.88	Dry	0	2	2	.45 Cal.	78 / USM45	289.6	1978	30.25
LW-II	Front	1.88	Dry	0	3	3	.45 Cal.	78 / USM45	289.7	1977	30.60
LW-II	Front	1.88	Dry	45	4	4	.45 Cal.	78 / USM45	289.5	1979	No Perforation
LW-II	Front	1.88	Dry	30	5	5	.45 Cal.	78 / USM45	288.7	1984	No Perforation
LW-II	Front	1.88	Dry	0	6	6	.45 Cal.	78 / USM45	290.8	1970	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 3.0" - 3.75"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Liberty Ammunition Ultra Defense, .45 Cal.+P 78 gr. USM45 Ultra Fragmentation @ Factory Velocity

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: Paragon
Panel Side: Front
Serial No.: 223483
Lot No.: 6590
Size: 2216
Weight (lbs.): 1.88
DoM: 6/7/2013
Threat Level: II

Sample Description:

No sample description per customer request.

Crawford/Nguyen

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 06/11/13
Via: UPS
Returned Via: UPS

Record No.: SA13080
Test Date: 06/11/13
Customer: Survival Armor

Test Conditions

Temperature:	73	°F.
Humidity:	48	%
Clay Block No.:	6	
Clay Temp.:	98.5	°F.
Drop (Avg.):	19.70	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.34 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.33 ft.
Midpoint to Target:	8.20 ft.
Target to Witness:	0 ft.
Barrel Length:	4 in.
Clay Block:	5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Model Number	Panel Side	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-II	Back	1.57	Dry	0	1	1	.40 S&W	60 / USM40	286.4	2000	27.35
LW-II	Back	1.57	Dry	0	2	2	.40 S&W	60 / USM40	287.5	1992	29.79
LW-II	Back	1.57	Dry	0	3	3	.40 S&W	60 / USM40	287.6	1992	28.84
LW-II	Back	1.57	Dry	45	4	4	.40 S&W	60 / USM40	290.1	1974	No Perforation
LW-II	Back	1.57	Dry	30	5	5	.40 S&W	60 / USM40	288.7	1984	No Perforation
LW-II	Back	1.57	Dry	0	6	6	.40 S&W	60 / USM40	300.3	1907	No Perforation
										-	
										-	
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										-	
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										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.0" - 2.75"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Liberty Ammunition Ultra Defense, .40 S&W 60 gr. USM40 Ultra Fragmentation @ Factory Velocity

Sample Tested:

Manufacturer:	Survival Armor
Model No.:	LW-II
Model Name:	Paragon
Panel Side:	Back
Serial No.:	223484
Lot No.:	6590
Size:	2014
Weight (lbs.):	1.57
DoM:	6/7/2013
Threat Level:	II

Sample Description:
No sample description per customer request.

Crawford/Nguyen

United States Test Laboratory

Survival Armor Inc.
Mr. Ken Mueller
13881 Plantation Rd.
International Center 1 Unit 8
Fort Meyers, FL 33912

November 20, 2012

Dear Mr. Mueller,

Per your request United States Test Laboratory performed Ballistic Resistance Testing in accordance with Modified/Abbreviated NIJ 0101.06, Special Threat. The testing was performed on model LW –II. The projectiles used for testing are listed below.

The following table represents a summary of the test results. A copy of the ballistic test reports are attached for your inspection.

The test record numbers included in this series of testing are: **SA12024-029**

USTL Report Number	Threat	Highest Velocity (fps)	Lowest Velocity (fps)	Highest BFS (mm)	Lowest BFS (mm)	Perforations
SA12024	9mm 127gr SXT+P+	1318	1241	42.49	30.72	None
SA12025	.357 Sig 125gr TMJ	1383	1325	39.71	34.77	None
SA12026	FN SS-197 5.7x28 40gr V-Max	1736	1706	24.00	20.53	None
SA12027	FN SS-192 5.7x28 28gr JHP	2095	2066	21.77	18.55	None
SA12028	7.62mm 85gr FMJ Tokarev	1546	1515	35.79	31.23	None
SA12029	Speer .357 Sig 125gr GDHP	1370	1342	35.33	32.17	None

The data presented is for the samples tested only; it does not guarantee the performance of other samples of the same or similar product. The test results do not imply endorsement by United States Test Laboratory.

The test samples are being shipped to you via UPS Ground. Should you have any questions, please feel free to call upon us.

Best regards,

Richard Mouser
General Manager

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12024
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions

Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 99.6 °F.
Drop (Avg.): 18.3 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208573	2215/2215	1.75	Wet	0	1	1	9mm	127/SXT	438.7	1306	30.72
208573	2215/2215	1.75	Wet	0	2	2	9mm	127/SXT	461.6	1241	42.49
208573	2215/2215	1.75	Wet	0	3	3	9mm	127/SXT	434.7	1318	34.53
208573	2215/2215	1.75	Wet	30	4	4	9mm	127/SXT	454.5	1260	No Perforation
208573	2215/2215	1.75	Wet	45	5	5	9mm	127/SXT	456.6	1254	No Perforation
208573	2215/2215	1.75	Wet	0	6	6	9mm	127/SXT	459.4	1247	No Perforation
										-	
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										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

9mm 127gr SXT+P+.
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208573
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:

*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12025
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 98.4 °F.
Drop (Avg.): 20.4 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208573	2215/2215	1.79	Wet	0	1	1	.357 Sig	125/TMJ	429.0	1335	35.08
208573	2215/2215	1.79	Wet	0	2	2	.357 Sig	125/TMJ	414.1	1383	39.71
208573	2215/2215	1.79	Wet	0	3	3	.357 Sig	125/TMJ	432.2	1325	34.77
208573	2215/2215	1.79	Wet	45	4	4	.357 Sig	125/TMJ	429.8	1333	No Perforation
208573	2215/2215	1.79	Wet	30	5	5	.357 Sig	125/TMJ	428.5	1337	No Perforation
208573	2215/2215	1.79	Wet	0	6	6	.357 Sig	125/TMJ	419.7	1365	No Perforation
										-	
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										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
.357Sig 125gr TMJ.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208573
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12026
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions

Temperature:	75	°F.
Humidity:	46	%
Clay Block No.:	6	
Clay Temp.:	97.3	°F.
Drop (Avg.):	20.0	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.38 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.33 ft.
Midpoint to Target:	8.20 ft.
Target to Witness:	0 ft.
Barrel Length:	4.8 in.
Clay Block:	5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208572	2215/2215	1.73	Wet	0	1	1	5.7x28	40/V-Max	331.7	1727	20.53
208572	2215/2215	1.73	Wet	0	2	2	5.7x28	40/V-Max	329.9	1736	24.00
208572	2215/2215	1.73	Wet	0	3	3	5.7x28	40/V-Max	335.7	1706	23.10
208572	2215/2215	1.73	Wet	45	4	4	5.7x28	40/V-Max	334.0	1715	No Perforation
208572	2215/2215	1.73	Wet	30	5	5	5.7x28	40/V-Max	333.6	1717	No Perforation
208572	2215/2215	1.73	Wet	0	6	6	5.7x28	40/V-Max	332.2	1724	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
FN SS-197 5.7x28 40gr V-Max
Customer requested factory velocities.

Sample Tested:

Manufacturer:	Survival Armor
Model No.:	LW-II
Model Name:	N/A
Sample Side:	Front
Sample No.:	208572
Lot No.:	5834
Size:	2215-2215
DoM:	11/12/2012
Threat Level:	II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12027
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 6
Clay Temp.: 96.5 °F.
Drop (Avg.): 18.3 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.38 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.8 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208572	2215/2215	1.77	Wet	0	1	1	5.7x28	28/JHP	273.4	2095	19.62
208572	2215/2215	1.77	Wet	0	2	2	5.7x28	28/JHP	274.3	2088	21.77
208572	2215/2215	1.77	Wet	0	3	3	5.7x28	28/JHP	277.2	2066	18.55
208572	2215/2215	1.77	Wet	30	4	4	5.7x28	28/JHP	275.2	2081	No Perforation
208572	2215/2215	1.77	Wet	45	5	5	5.7x28	28/JHP	274.6	2086	No Perforation
208572	2215/2215	1.77	Wet	0	6	6	5.7x28	28/JHP	274.5	2087	No Perforation
										-	
										-	
										-	
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										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
FN SS-192 5.7x28 28gr JHP
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208572
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12028
Test Date: 11/19/12
Customer: Survival Armor

Test Conditions
Temperature: 75 °F.
Humidity: 46 %
Clay Block No.: 7
Clay Temp.: 96.8 °F.
Drop (Avg.): 18.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208574	2215/2215	1.74	Wet	0	1	1	7.62x25	85/FMJ	370.8	1545	31.23
208574	2215/2215	1.74	Wet	0	2	2	7.62x25	85/FMJ	375.7	1525	35.79
208574	2215/2215	1.74	Wet	0	3	3	7.62x25	85/FMJ	370.5	1546	35.69
208574	2215/2215	1.74	Wet	30	4	4	7.62x25	85/FMJ	371.7	1541	No Perforation
208574	2215/2215	1.74	Wet	45	5	5	7.62x25	85/FMJ	378.2	1515	No Perforation
208574	2215/2215	1.74	Wet	0	6	6	7.62x25	85/FMJ	373.3	1534	No Perforation
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										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
7.62mm 85gr FMJ Tokarev.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Sample No.: 208574
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson/J.Nold

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 11/19/12
Via: UPS
Returned Via: UPS

Record No.: SA12029
Test Date: 11/20/12
Customer: Survival Armor

Test Conditions
Temperature: 72 °F.
Humidity: 50 %
Clay Block No.: 7
Clay Temp.: 95.6 °F.
Drop (Avg.): 19.2 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.45 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.33 ft.
Midpoint to Target: 8.20 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
208574	2215/2215	1.78	Wet	0	1	1	.357 Sig	125/GDHP	426.7	1342	32.17
208574	2215/2215	1.78	Wet	0	2	2	.357 Sig	125/GDHP	422.6	1355	35.25
208574	2215/2215	1.78	Wet	0	3	3	.357 Sig	125/GDHP	422.5	1356	35.33
208574	2215/2215	1.78	Wet	45	4	4	.357 Sig	125/GDHP	423.3	1353	No Perforation
208574	2215/2215	1.78	Wet	30	5	5	.357 Sig	125/GDHP	422.0	1357	No Perforation
208574	2215/2215	1.78	Wet	0	6	6	.357 Sig	125/GDHP	418.1	1370	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Speer .357 Sig 125gr. GDHP.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Sample No.: 208574
Lot No.: 5834
Size: 2215-2215
DoM: 11/12/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Nguyen/Wilson

Survival Armor Inc.
Mr. Ken Mueller
12621 Corporate Lakes Dr. Unit 8
Fort Myers, FL 33913

January 4, 2013

Dear Mr. Mueller,

Per your request United States Test Laboratory performed Ballistic Resistance Testing in accordance with Modified/Abbreviated NIJ 0101.06, Special Threat. The testing was performed on model **LW-II**. The projectiles used were Fiocchi 9mm Luger 115gr FMJ, Wolf 9mm Luger 115gr FMJ and Winchester .40 S&W 180gr SXT.

The following table represents a summary of the test results. A copy of the ballistic test reports are attached for your inspection.

The test record numbers included in this series of test are: **SA13001-003**

USTL Report Number	Projectile	Highest Velocity (fps)	Lowest Velocity (fps)	Highest BFS (mm)	Lowest BFS (mm)	Perforations
SA13001	Fiocchi 9mm Luger 115gr FMJ	1229	1161	31.59	25.55	None
SA13002	Wolf 9mm Luger 115gr FMJ	1211	1154	29.09	27.18	None
SA13003	Winchester .40 S&W 180gr SXT	1019	979	27.84	25.03	None

The data presented is for the samples tested only; it does not guarantee the performance of other samples of the same or similar product. The test results do not imply endorsement by United States Test Laboratory.

The test samples are being shipped to you via UPS Ground. Should you have any questions, please feel free to call upon us.

Best regards,

Matt Lutz
Acting Facility Manager

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13001
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions
Temperature: 71 °F.
Humidity: 31 %
Clay Block No.: 9
Clay Temp.: 95.3 °F.
Drop (Avg.): 19.0 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211439	2216/2216	1.90	Wet	0	1	1	9mm	115 FMJ	465.9	1229	25.55
211439	2216/2216	1.90	Wet	0	2	2	9mm	115 FMJ	471.9	1214	28.44
211439	2216/2216	1.90	Wet	0	3	3	9mm	115 FMJ	479.2	1195	31.59
211439	2216/2216	1.90	Wet	45	4	4	9mm	115 FMJ	491.2	1166	No Perforation
211439	2216/2216	1.90	Wet	30	5	5	9mm	115 FMJ	479.5	1195	No Perforation
211439	2216/2216	1.90	Wet	0	6	6	9mm	115 FMJ	493.2	1161	No Perforation
										-	
										-	
										-	
										-	
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										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Fiocchii 9mm Luger, 115 gr. FMJ.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Serial No.: 211439
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:
*** PROPRIETARY INFORMATION***
Redacted By Survival Armor

Landon/Nguyen/Zerger

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13002
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions

Temperature: 73 °F.
Humidity: 30 %
Clay Block No.: 9
Clay Temp.: 93.7 °F.
Drop (Avg.): 18.5 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2

Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211439	2216/2216	1.95	Wet	0	1	1	9mm	115 FMJ	477.8	1199	27.18
211439	2216/2216	1.95	Wet	0	2	2	9mm	115 FMJ	492.8	1162	29.09
211439	2216/2216	1.95	Wet	0	3	3	9mm	115 FMJ	496.4	1154	28.74
211439	2216/2216	1.95	Wet	45	4	4	9mm	115 FMJ	482.1	1188	No Perforation
211439	2216/2216	1.95	Wet	30	5	5	9mm	115 FMJ	473.0	1211	No Perforation
211439	2216/2216	1.95	Wet	0	6	6	9mm	115 FMJ	485.6	1180	No Perforation
										-	
										-	
										-	
										-	
										-	
										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:

Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 2.50"

Backing Material Surface Preparation (Section 4.2.5.4)

Planar

Test Round Used:

Wolf 9mm Luger, 115 gr. FMJ (bimetal jacket).
Customer requested factory velocities.

Sample Tested:

Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Back
Serial No.: 211439
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:

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Redacted By Survival Armor

Landon/Nguyen/Zerger

UNITED STATES TEST LABORATORY
BALLISTIC RESISTANCE TEST

Date Received: 01/04/13
Via: UPS
Returned Via: UPS

Record No.: SA13003
Test Date: 01/04/13
Customer: Survival Armor

Test Conditions
Temperature: 71 °F.
Humidity: 31 %
Clay Block No.: 9
Clay Temp.: 92.8 °F.
Drop (Avg.): 18.8 mm
Test Spec.: Modified/Abbreviated NIJ 0101.06
Threat Level: Special Threat
Condition: New

Range 2
Muzzle to Screen 1: 5.33 ft.
Screen 1 - 2: 5.73 ft.
Screen 2 - Target: 5.27 ft.
Midpoint to Target: 8.14 ft.
Target to Witness: 0 ft.
Barrel Length: 4.0 in.
Clay Block: 5.5 in.

Sample Description			Test/Ammunition Description						Chronograph		Results
Panel Serial Number	Panel Size	Panel Weight (lbs.)	Wet Dry	Degree - Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
211446	2216/2216	1.89	Wet	0	1	1	.40 S&W	180 SXT	584.9	979	25.03
211446	2216/2216	1.89	Wet	0	2	2	.40 S&W	180 SXT	579.6	988	27.05
211446	2216/2216	1.89	Wet	0	3	3	.40 S&W	180 SXT	579.2	989	27.84
211446	2216/2216	1.89	Wet	45	4	4	.40 S&W	180 SXT	563.3	1017	No Perforation
211446	2216/2216	1.89	Wet	30	5	5	.40 S&W	180 SXT	575.3	996	No Perforation
211446	2216/2216	1.89	Wet	0	6	6	.40 S&W	180 SXT	562.3	1019	No Perforation
										-	
										-	
										-	
										-	
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										-	
										-	
										-	

This test was performed in accordance with the specification requirements and the results properly reflect the ballistic performance of the listed sample.

United States Test Laboratory
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone 316-832-1600
Fax 316-832-1602

REMARKS/NOTES:
Shot location marking per NIJ 0101.06, Section 7.8.1.
Shot-to-edge distance: 3.00"

Backing Material Surface Preparation (Section 4.2.5.4)
Planar

Test Round Used:
Winchester .40 Smith & Wesson, 180 gr. SXT.
Customer requested factory velocities.

Sample Tested:
Manufacturer: Survival Armor
Model No.: LW-II
Model Name: N/A
Sample Side: Front
Serial No.: 211446
Lot No.: 6004
Size: 2216-2216
DoM: 12/31/2012
Threat Level: II

Sample Description:
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Redacted By Survival Armor

Landon/Nguyen/Zerger

Chesapeake TESTING

www.chesapeaketesting.com

15 October 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P), and Ballistic Resistance Test: Job No. 2049-123, Tested 7 and 8 October 2014, Purchase Order No. 0008797, Test Report No. CT-RD-14-1175

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 7 and 8 October 2014. This report includes a summary of the test as well as a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jmt

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

4603B Compass Point Rd., Belcamp, MD 21017 v: 410.297.8154 f: 410.297.8160

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008797
Report No.: CT-RD-14-1175

Survival Armor, Armor Protection Ballistic Limit, V_{50} BL(P) and Ballistic Resistance Test: Job No. 2049-123, Tested 7 and 8 October 2014

Prepared by:

Craig A. Thomas
Justine M. Tambourine

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

15 October 2014

Further dissemination only as directed by Survival Armor, October 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

1 Introduction

Survival Armor provided eight armor samples to Chesapeake Testing for ballistic testing on 7 and 8 October 2014. This is a two part report. Section 2 is the Protection Ballistic Limit V_{50} BL(P) test report and Section 3 is the ballistic resistance test report. The Areal Density test is presented in Attachment A.

2 Protection Ballistic Limit Test, V_{50} BL(P)

Four armor samples were used for V_{50} testing. Prior to testing, the samples were sized and weighed. The results are shown in Table 1.

Table 1. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-123-1	225329	Proprietary	C-2	1.84
2049-123-2	225328	Proprietary	C-2	1.84
2049-123-3	225327	Proprietary	C-2	1.84
2049-123-4	225326	Proprietary	C-2	1.85

2.1 Threats and Instrumentation

2.1.1 Threats

The threats used for this V_{50} test were 2-, 4-, 16-, and 64-grain right circular cylinder (RCC) projectiles fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.1.2 Instrumentation

Projectile velocity measurements were obtained using a Physics Applications, 3-inch Mag-100, magnetic intervalometer system for the 2- & 4-grain projectiles; and projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs for the 16- & and 64-grain projectiles.

2.2 Details of Test

The objective of this test was to conduct a ballistic limit V_{50} performance test on the armor samples in accordance with DEA Armor Testing Protocol, MIL-STD-662F, and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with MIL-STD-662F. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (68 ±4°F).

SURVIVAL ARMOR PROPRIETARY INFORMATION

For each shot, the target was strapped to a 5.5-in clay backing that was clamped to a rigid test fixture. The projectile velocity for the initial shot against each sample was in accordance with the referenced performance standard. Velocities for subsequent shots were based on the result of the previous shot. The required ballistic limit (BL(P)) for each threat tested is presented in Table 2.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

2.3 Summary of Results

The results of the V_{50} ballistic limit testing are summarized in Table 2. The round-by-round data sheets and scatter plots for all testing performed are provided on the following pages.

The following is a list of abbreviations used in the test data sheets:

C = Complete penetration (same as CP).
Gap = For V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the complete penetration occurs at a higher velocity than the partial penetration.
HP = For V_{50} data, the highest velocity at which a partial penetration occurred.
LC = For V_{50} data, the lowest velocity at which a complete penetration occurred.
P = Partial penetration (same as PP).
ROR = Range of results; for V_{50} data, the difference between the highest and lowest velocities.
V_{50} = Statistical velocity at which the threat defeats the armor 50% of the time.
RMR = Range of mixed results; for V_{50} data, the difference in velocities between the highest partial penetration and the lowest complete penetration when the partial penetration occurs at a higher velocity than the complete penetration.
True = Round was used in calculating a V_{50} or an approximate V_{50}.
False = Round was not used in calculating a V_{50} or an approximate V_{50}.
NR = No velocity reading was obtained.

SURVIVAL ARMOR PROPRIETARY INFORMATION

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 2. Summary of V_{50} Ballistic Limit Test Results

Job No.	Sample No.	Threat	Target Obliq. (deg)	Required Ballistic Limit (BL(P))	Ballistic Limit Data				
					V_{50} (ft/s)	No. of Points	RMR (ft/s)	GAP (ft/s)	ROR (ft/s)
2049-123-1	225329	2-grain RCC	0.0	2735	2907	6	89	NA	107
2049-123-2	225328	4-grain RCC	0.0	2420	2532	6	NA	20	122
2049-123-3	225327	16-grain RCC	0.0	2080	2105	6	74	NA	74
2049-123-4	225326	64-grain RCC	0.0	1620	1657	6	40	NA	108

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-1
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225329

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2735 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 8.000	Range No.:	1
Witness Panel:	Clay	Primary Vel. Location (ft):	6.500	Temp:	64.4 °F
Obliquity:	0.0°	Range to Target (ft):	10.000	BP:	29.8 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	6.000	RH:	49.5%
Condition:	Ambient			Barrel/Gun:	CDS-0403
				Gunner:	Matt Rixham
				Recorder:	Joe Moore

Ammunition

Projectile	Lot No.	Powder
(1) 2-grain RCC	9132	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.5 mm, 17.3 mm, 19.5 mm, 17.8 mm, 17.2 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	6.2	1006.0	2982	2855	C	True	
2	6.0	1036.3	2895	2771	P	False	
3	6.1	1032.2	2906	2782	P	False	
4	6.2	1007.6	2977	2851	P	True	
5	6.3	1026.4	2923	2798	P	False	
6	6.4	980.0	3061	2932	C	True	
7	6.3	NR	NR	NR	P	False	(a)
8	6.3	990.8	3028	2900	P	True	
9	6.4	976.0	3074	2944	P	True	
10	6.5	971.5	3088	2958	C	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 57
Block temp.: 92.9 °F

Footnotes:
(a) No velocity reading was obtained.

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2907 ft/s
High Partial:	2944 ft/s
Low Complete:	2855 ft/s
Range of Results (ROR):	107 ft/s
Range of Mix Results (RMR):	89 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

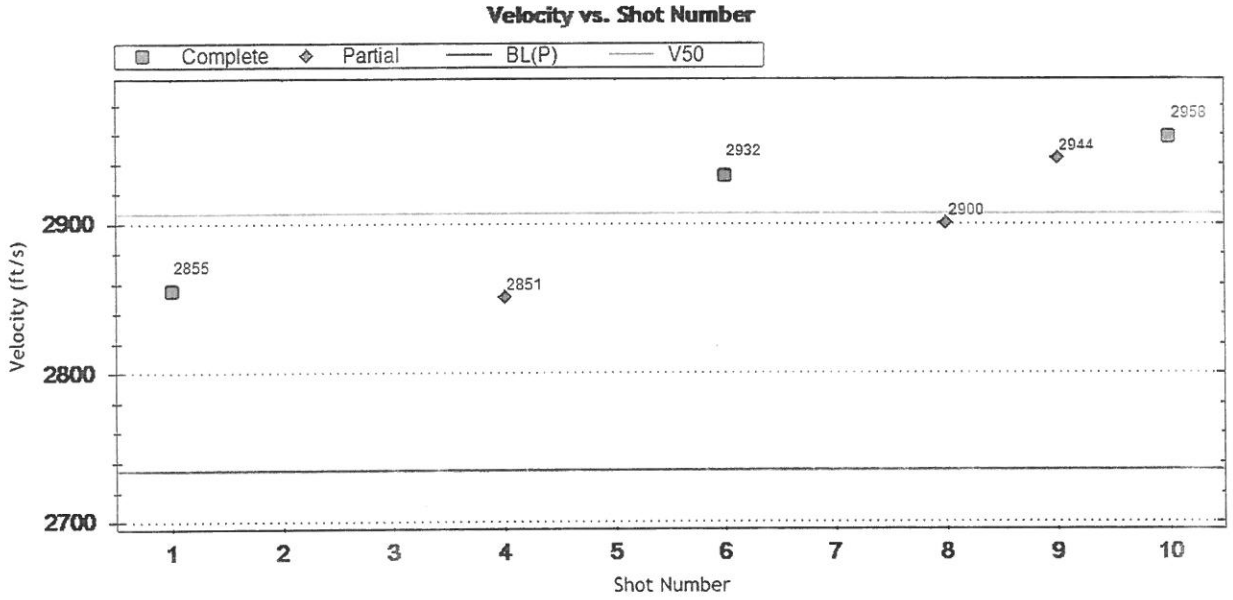
Client: Survival Armor
Job No.: 2049-123-1
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225329

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2907 ft/s
High Partial:	2944 ft/s
Low Complete:	2855 ft/s
Range of Results (ROR):	107 ft/s
Range of Mix Results (RMR):	89 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-2
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor | **Sample No.:** 225328

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2420 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 8.000	Range No.:	1
Witness Panel:	Clay	Primary Vel. Location (ft):	6.500	Temp:	64.4 °F
Obliquity:	0.0°	Range to Target (ft):	10.000	BP:	29.9 inHg
Backing Material:	5.5-in clay	Target to Witness (in):	6.000	RH:	47.7%
Condition:	Ambient			Barrel/Gun:	CDS-0403
				Gunner:	Matt Rixham
				Recorder:	Joe Moore

Ammunition

Projectile	Lot No.	Powder
(1) 4-grain RCC	9139	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.5 mm, 17.3 mm, 19.5 mm, 17.8 mm, 17.2 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	5.3	1118.9	2681	2594	C	True	
2	5.1	1149.3	2610	2525	P	True	
3	5.2	1140.4	2631	2545	C	True	
4	5.0	1155.4	2597	2511	P	True	
5	5.2	1140.1	2631	2545	C	True	
6	5.0	1173.6	2556	2472	P	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 57
Block temp.: 92.9 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2532 ft/s
High Partial:	2525 ft/s
Low Complete:	2545 ft/s
Range of Results (ROR):	122 ft/s
Range of Mix Results (RMR):	NA
Gap:	20 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

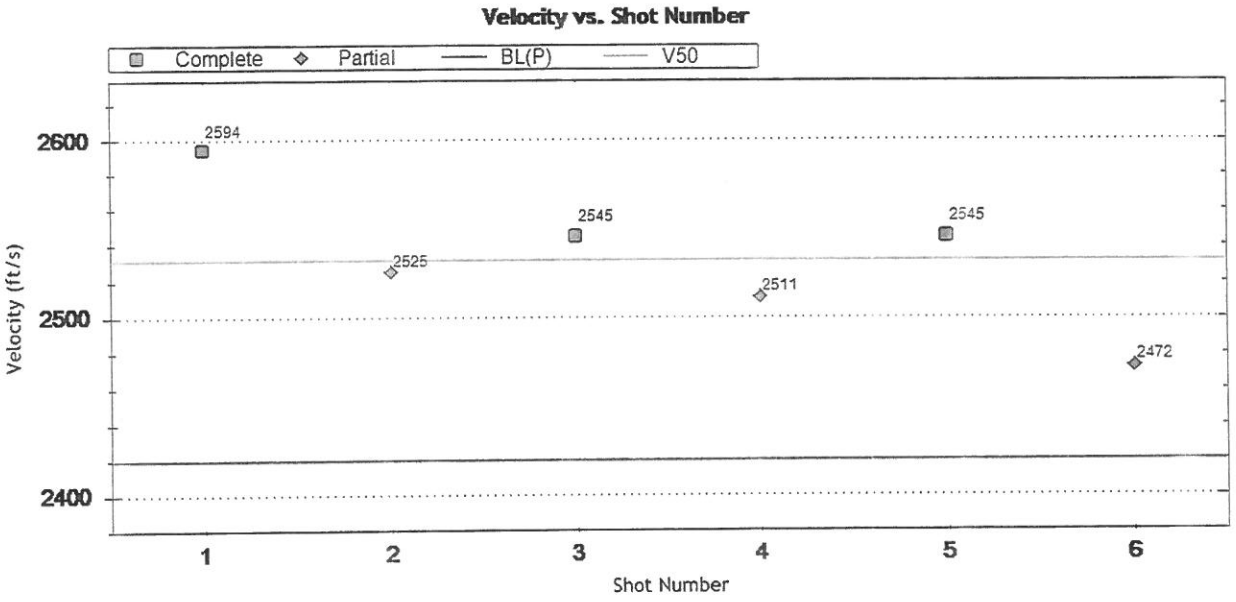
Client: Survival Armor
Job No.: 2049-123-2
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225328

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2532 ft/s
High Partial:	2525 ft/s
Low Complete:	2545 ft/s
Range of Results (ROR):	122 ft/s
Range of Mix Results (RMR):	NA
Gap:	20 ft/s



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-3
Test Date: 10/7/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225327

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.84 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	2080 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 5.333, 9.666, 10.000	Range No.:	7
Witness Panel:	Clay			Temp:	70.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	7.500	BP:	29.97 inHg
Backing Material:	5.5-in clay	Range to Target (ft):	15.000	RH:	41%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CDS-0403
				Gunner:	Sam Swank
				Recorder:	Josh Smith

Ammunition

Projectile	Lot No.	Powder
(1) 16-grain RCC	9189	Bullseye

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.7 mm, 18.8 mm, 17.9 mm, 17.8 mm, 17.6 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	9.0	2153	2322	1862	2327	2325	2209	C	False	
2	8.5	2298	2176	1988	2180	2178	2069	C	True	
3	8.2	2360	2119	2042	2122	2120	2014	P	False	
4	8.4	2316	2159	2002	2164	2162	2054	P	False	
5	8.6	2282	2191	1972	2197	2194	2085	C	True	
6	8.5	2298	2176	1988	2180	2178	2069	P	False	
7	8.6	2266	2207	1961	2210	2208	2098	P	False	
8	8.7	2248	2224	1943	2230	2227	2116	P	True	
9	8.8	2218	2254	1919	2258	2256	2143	P	True	
10	9.0	2158	2317	1865	2323	2320	2204	C	False	
11	8.9	2236	2236	1935	2239	2238	2126	P	True	
12	9.0	2275	2198	1970	2199	2199	2089	C	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 58
Block temp.: 98.4 °F, 96.8 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2105 ft/s
High Partial:	2143 ft/s
Low Complete:	2069 ft/s
Range of Results (ROR):	74 ft/s
Range of Mix Results (RMR):	74 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

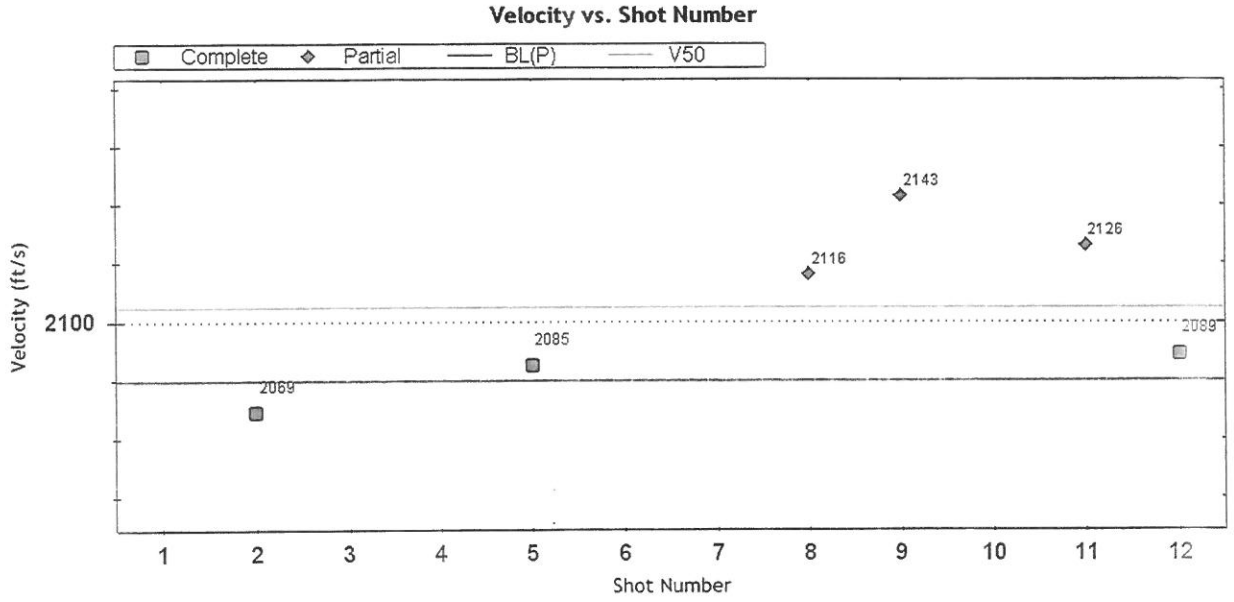
Client: Survival Armor
Job No.: 2049-123-3
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225327

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	2105 ft/s
High Partial:	2143 ft/s
Low Complete:	2069 ft/s
Range of Results (ROR):	74 ft/s
Range of Mix Results (RMR):	74 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-4
Test Date: 10/7/2014

Test Panel | **Description:** Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor | **Sample No.:** 225326

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.85 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
Required BL(P):	1620 ft/s	Plies/Laminates:	NA		

Setup

Shot Spacing:	MIL-STD-662F	Primary Vel. Screens (ft):	5.000, 5.333, 9.666, 10.000	Range No.:	7
Witness Panel:	Clay			Temp:	70.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	7.500	BP:	29.97 inHg
Backing Material:	5.5-in clay	Range to Target (ft):	15.000	RH:	40%
Condition:	Ambient	Target to Witness (in):	0.000	Barrel/Gun:	CDS-0600
				Gunner:	Sam Swank
				Recorder:	Josh Smith

Ammunition

Projectile	Lot No.	Powder
(1) 64-grain RCC	9166	IMR 4350

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 17.4 mm, 18.0 mm, 19.0 mm, 17.5 mm, 17.1 mm
(2) DEA Armor Testing Protocol
(3) MIL-STD-662F
(4) Customer request

Shot No.	Powder/ Seating	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Striking Vel. (ft/s)	Result	Include in V_{50}	Footnotes
1	100.0	2839	1761	2458	1763	1762	1710	C	False	
2	96.0	2873	1740	2487	1742	1741	1690	P	True	
3	98.0	2788	1793	2406	1801	1797	1744	C	False	
4	96.0	2921	1712	2529	1713	1713	1662	C	True	
5	94.0	2848	1756	2456	1764	1760	1708	C	True	
6	92.0	2944	1698	2548	1701	1699	1650	C	True	
7	89.0	2975	1681	2575	1683	1682	1633	P	True	
8	89.5	3042	1644	2624	1651	1647	1600	P	True	

Remarks:
Projectile yaw check: 0° on all impacts.
Block No.: 58
Block temp.: 97.6 °F, 96.5 °F

Footnotes:

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	1657 ft/s
High Partial:	1690 ft/s
Low Complete:	1650 ft/s
Range of Results (ROR):	108 ft/s
Range of Mix Results (RMR):	40 ft/s
Gap:	NA

SURVIVAL ARMOR PROPRIETARY INFORMATION

PROTECTION BALLISTIC LIMIT TEST, V_{50} BL(P)

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

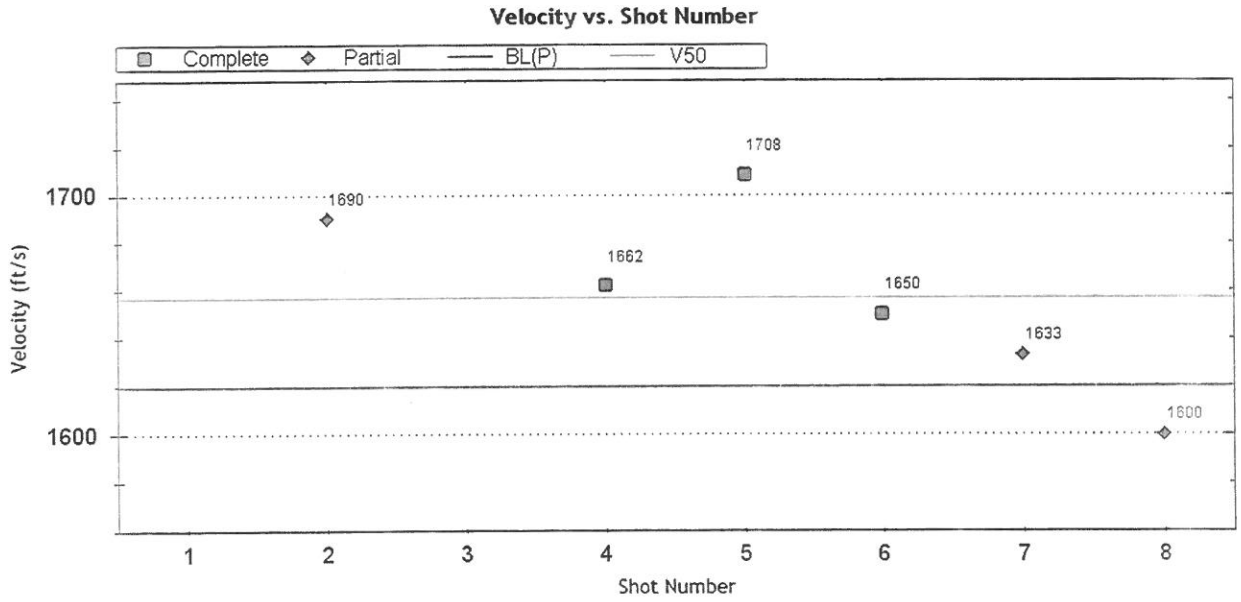
Client: Survival Armor
Job No.: 2049-123-4
Test Date: 10/7/2014

Manufacturer: Survival Armor

Sample No.: 225326

V_{50} Summary:

No. Points:	3 and 3
V_{50}:	1657 ft/s
High Partial:	1690 ft/s
Low Complete:	1650 ft/s
Range of Results (ROR):	108 ft/s
Range of Mix Results (RMR):	40 ft/s
Gap:	NA



SURVIVAL ARMOR PROPRIETARY INFORMATION

3 Ballistic Resistance Testing

Four armor samples were used for ballistic resistance testing. Prior to testing, the samples were sized and weighed. The results are shown in Table 3.

Table 3. Physical Data for Armor Samples

Job No.	Sample No.	Armor Description	Size	Weight (lbs)
2049-123-A	225325	Proprietary	C-2	1.84
2049-123-B	225324	Proprietary	C-2	1.85
2049-123-C	225323	Proprietary	C-2	1.84
2049-123-D	225322	Proprietary	C-2	1.84

3.1 Threats and Instrumentation

3.1.1 Threats

The threats used for this ballistic resistance test were:

- 9-mm NATO, 124-grain full metal jacketed (FMJ) projectiles.
- 9-mm, 127-grain supreme expansion technology (SXT) projectiles.
- .40-cal., 165-grain S&W Speer gold dot hollow point (GDHP) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

3.1.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens with Hewlett-Packard (HP) counter chronographs. A digital caliper was used to measure the post-impact deformations observed in the backing clay for select shots.

3.2 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor samples in accordance with DEA Armor Testing Protocol and the customer's request. Shot spacing between multiple impacts on a single sample was in accordance with the referenced performance standard. Shots against the armor samples were performed at 0.0° obliquity and ambient range temperature (64 ±1 °F).

SURVIVAL ARMOR PROPRIETARY INFORMATION

The sample for Job No. 2049-123-A was tested under ambient conditions. The sample for Job No. 2049-123-B was conditioned at +150 °F (+66 °C); and the sample for Job No. 2049-123-C was conditioned at -20 °F (-29 °C) for no less than 15 to 18 hours prior to testing. The sample for Job No. 2049-123-D was submerged in water for 20 to 25 minutes prior to testing. For each shot, the target was strapped to a 5.5-in clay/plywood backing that was clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

The threat projectiles were required to have no greater than 5° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

3.3 Summary of Results

The results of the ballistic resistance test are shown in Table 4. The round-by-round data sheets for all ballistic resistance testing performed are presented on the following pages.

SURVIVAL ARMOR PROPRIETARY INFORMATION

Table 4. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Threat	Target Obliquity (deg)	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Def. (mm)
2049-123-A	225325	9-mm NATO, 124-grain FMJ	0.0	1	1403	None	29.1
				2	1413	None	24.7
				3	1412	None	25.1
				4	1407	None	NA
				5	1420	None	NA
				6	1423	None	24.8
				7	1408	None	34.6
				8	1432	None	36.0
				9	NR[a]	None	29.2
		.40-cal., 165-grain S&W Speer (GDHP)	0.0	10	NR[a]	None	26.4
		9-mm, 127-grain SXT	0.0	11	NR[a]	None	28.3
2049-123-B	225324	9-mm NATO, 124-grain FMJ	0.0	1	1416	None	24.0
				2	1419	None	23.8
				3	1420	None	23.1
2049-123-C	225323	9-mm NATO, 124-grain FMJ	0.0	1	1412	None	29.3
				2	1413	None	22.9
				3	1416	None	27.4
2049-123-D	225322	9-mm NATO, 124-grain FMJ	0.0	1	1423	None	24.4
				2	1411	None	24.5
				3	1430	None	24.8

[a] Contact shot

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-A
Test Date: 10/8/2014

Test Panel

Description: Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor

Sample No.: 225325

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.84 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 64.9 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 63.6%
Condition: Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory
(3) .40-cal., 165-grain S&W Speer (GDHP)	Speer	Factory

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.5 mm, 19.0 mm, 19.4 mm, 19.0 mm, 18.0 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3564	1403	3088	1403	1403	None	29.1	(a)
2	1	3538	1413	3065	1414	1413	None	24.7	(a)
3	1	3541	1412	3068	1412	1412	None	25.1	(a)
4	1	3554	1407	3080	1407	1407	None	NA	(b)
5	1	3521	1420	3050	1421	1420	None	NA	(b)
6	1	3514	1423	3045	1423	1423	None	24.8	(b)
7	1	3551	1408	3076	1409	1408	None	34.6	(c)
8	1	3491	1432	3025	1432	1432	None	36.0	(c)
9	1	NR	NR	NR	NR	NR	None	29.2	(d, e)
10	3	NR	NR	NR	NR	NR	None	26.4	(d, f)
11	2	NR	NR	NR	NR	NR	None	28.3	(d, g)

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.4 °F

Footnotes:
(a) Dry Test
(b) Multiple round test (no Smoothing)
(c) Edge test
(d) Contact shot
(e) Average velocity: 1420 ft/s
(f) Average velocity: 1131 ft/s
(g) Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-B
Test Date: 10/8/2014

Test Panel | **Description:** Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor | **Sample No.:** 225324

Size:	C-2	Heat No.:	NA	Date Received:	10/6/2014
Thickness:	NA	Weight:	1.85 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	UPS
		Plies/Laminates:	NA		

Setup

Shot Spacing:	DEA requirements	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	5
Witness Panel:	Clay			Temp:	64.7 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	29.7 inHg
Backing Material:	5.5-in clay/plywood	Range to Target (ft):	17.200	RH:	58.9%
Condition:	+150 °F for no less than 15 to 18 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.4 mm, 19.6 mm, 18.7 mm, 18.9 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3530	1416	3059	1416	1416	None	24.0	
2	1	3524	1419	3053	1419	1419	None	23.8	
3	1	3522	1420	3051	1420	1420	None	23.1	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.0 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-C
Test Date: 10/8/2014

Test Panel — **Description:** Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor — **Sample No.:** 225323

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.84 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 64.7 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 60.7%
Condition: -20 °F for no less than 15 to 18 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.4 mm, 19.6 mm, 18.7 mm, 18.9 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3541	1412	3068	1412	1412	None	29.3	
2	1	3539	1413	3066	1413	1413	None	22.9	
3	1	3531	1416	3060	1416	1416	None	27.4	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 98.0 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-123-D
Test Date: 10/8/2014

Test Panel — **Description:** Proprietary, LW-IIIA, Lot No.: 8050

Manufacturer: Survival Armor — **Sample No.:** 225322

Size: C-2	Heat No.: NA	Date Received: 10/6/2014
Thickness: NA	Weight: 1.84 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: UPS
	Plies/Laminates: NA	

Setup

Shot Spacing: DEA requirements	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 5
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 64.7 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 59.9%
Condition: Submerged in water for 20 to 25 minutes		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.0 mm, 18.0 mm, 18.4 mm, 17.3 mm, 17.7 mm
(2) DEA Armor Testing Protocol
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3513	1423	3044	1423	1423	None	24.4	
2	1	3544	1411	3070	1411	1411	None	24.5	
3	1	3499	1429	3030	1430	1430	None	24.8	

Remarks:
Required velocity: 1400 ±50 ft/s for projectile control
Clay block No.: 12
Clay block temp.: 97.2 °F

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

Chesapeake TESTING

www.chesapeaketesting.com

10 September 2014

Survival Armor
13881 Plantation Road
International Center I, Unit 8
Fort Myers, FL 33912

Attention: Mr. Ken Mueller

Subject: Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-122, Tested 9 September 2014, Purchase Order No. 0008530, Test Report No. CT-RD-14-1011

Dear Mr. Mueller:

Please find enclosed a report documenting the subject test series that was conducted by Chesapeake Testing on 9 September 2014. This report includes a detailed shot record for each armor sample tested.

If you have any questions related to this test, please call Mr. Craig Thomas at 410-297-8154 or contact him via e-mail at craig.thomas@chesapeaketesting.com.

Sincerely,

Chris Schueler
VP Operations, Chesapeake Testing

jmt

Enc. a/s

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

POC: Mr. Ken Mueller
POC Phone: 239-210-0891
Purchase Order No.: 0008530
Report No.: CT-RD-14-1011

Survival Armor, Armor Protection Ballistic Resistance Test: Job No. 2049-122, Tested 9 September 2014

Prepared by:

Craig A. Thomas
Justine M. Tambourine

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

10 September 2014

Further dissemination only as directed by Survival Armor, September 2014.

This report shall not be used to claim product certification, approval or endorsement. The results of the testing relate only to the samples submitted for testing and are not representative of a complete model or lot. This test report shall not be interpreted as an endorsement by Chesapeake Testing as to the continued quality or performance of any items of the same or similar design.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with Survival Armor.

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-1
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor
Sample No.: 1408263317 Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 59.1%
Condition: Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3507	1426	3035	1428	1427	None	
2	1	3515	1422	3042	1424	1423	None	
3	1	3488	1433	3019	1435	1434	None	
4	1	3500	1429	3028	1431	1430	None	(a)
5	1	3464	1443	2997	1446	1445	None	(a)
6	1	3462	1444	2996	1446	1445	None	(a)
7	1	3431	1457	2969	1459	1458	None	(b)
8	1	3433	1456	2971	1458	1457	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-2
Test Date: 9/9/2014

Test Panel | Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1408263317 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 59.7%
Condition: Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3453	1448	2988	1450	1449	None	
2	1	3472	1440	3005	1442	1441	None	
3	1	3479	1437	3010	1440	1438	None	
4	1	3469	1441	3001	1444	1443	None	(a)
5	1	3470	1441	3003	1443	1442	None	(a)
6	1	3474	1439	3007	1441	1440	None	(a)
7	1	3451	1449	2987	1451	1450	None	(b)
8	1	3464	1443	2998	1445	1444	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-3
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263319 Test 1

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.30 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block	Primary Vel. Location (ft):	9.000	Temp:	65.3 °F
Obliquity:	0.0°	Range to Target (ft):	17.200	BP:	30 inHg
Backing Material:	Gelatin block	Target to Witness (in):	0.000	RH:	60%
Condition:	+140 °F for 14 to 24 hours			Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+WSpeer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Remington	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2992	1448	1447	None	
2	1	3518	1421	3045	1423	1422	None	
3	1	3487	1434	3018	1436	1435	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity: 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-4
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263319 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI Test protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.1 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.9%
Condition: +140 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+WSpeer (GDHP)	Speer	Accurate No. 2
(4) .45 Auto, 230-grain BJHP	Remington	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3466	1443	2999	1445	1444	None	
2	1	3470	1441	3003	1443	1442	None	
3	1	3483	1436	3013	1438	1437	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity: 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-5
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263316 Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.31 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.1%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3476	1438	3008	1440	1439	None	
2	1	3460	1445	2994	1447	1446	None	
3	1	3455	1447	2990	1449	1448	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-6
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263316 Test 2

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 60.8%
Condition: -40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ (2) 9-mm, 127-grain SXT	Federal Winchester Ranger	Accurate No. 2 Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3517	1422	3043	1424	1423	None	
2	1	3474	1439	3006	1441	1440	None	
3	1	3488	1433	3018	1436	1435	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-7
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1403263318 Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.40 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58.6%
Condition: Submerged in water for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3544	1411	3067	1413	1412	None	
2	1	3497	1430	3026	1432	1431	None	
3	1	3499	1429	3027	1431	1430	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.64 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-8
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1403263318 Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.28 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block		Temp: 65.3 °F
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 30 inHg
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 61.7%
Condition: Submerged in water for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3500	1429	3029	1431	1430	None	
2	1	3458	1446	2993	1448	1447	None	
3	1	3472	1440	3004	1442	1441	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.57 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-9
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263314 Tumbled Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.30 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 61.8%
Condition: NIJ-STD-0101.06 Section 5 for 12 days/Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3481	1436	3012	1439	1437	None	
2	1	3483	1436	3014	1438	1437	None	
3	1	3508	1425	3036	1427	1426	None	
4	1	3457	1446	2992	1448	1447	None	(a)
5	1	3469	1441	3002	1443	1442	None	(a)
6	1	3451	1449	2986	1451	1450	None	(a)
7	1	3455	1447	2989	1450	1448	None	(b)
8	1	3481	1436	3011	1439	1438	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-10
Test Date: 9/9/2014

Test Panel Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor | Sample No.: 1408263314 Tumble Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 60.9%
Condition: NIJ-STD-0101.06 Section 5 for 12 days/Ambient		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3487	1434	3017	1436	1435	None	
2	1	3454	1448	2988	1450	1449	None	
3	1	3449	1450	2985	1452	1451	None	
4	1	3468	1442	3001	1444	1443	None	(a)
5	1	3450	1449	2985	1452	1450	None	(a)
6	1	3457	1446	2992	1448	1447	None	(a)
7	1	3453	1448	2988	1450	1449	None	(b)
8	1	3451	1449	2986	1451	1450	None	(b)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-2014
Required velocity: 1375 to 1450 ft/s for control projectile

Footnotes:
(a) Multiple round test (no smoothing)
(b) Edge test

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-11
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263312 Tumbled Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.31 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	61.5%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+W Speer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Remington	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3483	1436	3014	1438	1437	None	
2	1	3491	1432	3021	1434	1433	None	
3	1	3449	1450	2985	1452	1451	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-12
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263312 Tumbled Test 4

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.39 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.1 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	58.2%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/+140 °F for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 147-grain JHP	Speer	Factory
(3) .40-cal., 165-grain S+W Speer (GDHP)	Speer	Factory
(4) .45 Auto, 230-grain BJHP	Speer	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2979	1455	1453	None	
2	1	3440	1453	2974	1457	1455	None	
3	1	3460	1445	2994	1447	1446	None	
4	2	NR	NR	NR	NR	NR	None	(a)
5	3	NR	NR	NR	NR	NR	None	(b)
6	4	NR	NR	NR	NR	NR	None	(c)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at G1 location, Average velocity: 1136 ft/s
(b) Contact shot at G2 location, Average velocity: 1131 ft/s
(c) Contact shot at G3 location, Average velocity 965 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-13
Test Date: 9/9/2014

Test Panel — Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor — Sample No.: 1408263310 Tumbled Test 3

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.29 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.3 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 59.4%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/-40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3443	1452	2980	1454	1453	None	
2	1	3464	1443	2998	1445	1444	None	
3	1	3524	1419	3049	1421	1420	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-14
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263310 Tumbled Test 4

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.41 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Gelatin block	Primary Vel. Location (ft): 9.000	Temp: 65.1 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: Gelatin block	Target to Witness (in): 0.000	RH: 58%
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/-40 °F for 14 to 24 hours		Barrel/Gun: CT-3091
		Gunner: Ramon Chavez
		Recorder: Mike Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2
(2) 9-mm, 127-grain SXT	Winchester Ranger	Factory

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3534	1415	3058	1417	1416	None	
2	1	3524	1419	3049	1421	1420	None	
3	1	3466	1443	2999	1445	1444	None	
4	2	NR	NR	NR	NR	NR	None	(a)

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.

Footnotes:
(a) Contact shot at H1 location, Average velocity: 1388 ft/s

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-15
Test Date: 9/9/2014

Test Panel Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor
Sample No.: 1408263313 Tumbled Test 1

Size: 2216-2216	Heat No.: NA	Date Received: 8/27/2014
Thickness: NA	Weight: 2.30 lbs	Via: UPS
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: FBI protocol	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3	
Witness Panel: Gelatin block		Temp: 65.3 °F	
Obliquity: 0.0°	Primary Vel. Location (ft): 9.000	BP: 30 inHg	
Backing Material: Gelatin block	Range to Target (ft): 17.200	RH: 60.9%	
Condition: Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/Submerged in water for 14 to 24 hours	Target to Witness (in): 0.000	Barrel/Gun: CT-3091	
		Gunner: Ramon Chavez	
		Recorder: John Murray	

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3495	1431	3025	1432	1432	None	
2	1	3449	1450	2984	1452	1451	None	
3	1	3477	1438	3010	1440	1439	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 3.74 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: Survival Armor
Job No.: 2049-122-16
Test Date: 9/9/2014

Test Panel

Description: Proprietary, Model No.: LW-IIIA, Lot No.: 7904

Manufacturer: Survival Armor

Sample No.: 1408263313 Tumbled Test 2

Size:	2216-2216	Heat No.:	NA	Date Received:	8/27/2014
Thickness:	NA	Weight:	2.31 lbs	Via:	UPS
Avg. Thick:	NA	Hardness:	NA	Returned:	FedEx
		Plies/Laminates:	NA		

Setup

Shot Spacing:	FBI protocol	Primary Vel. Screens (ft):	6.500, 6.833, 11.166, 11.500	Range No.:	3
Witness Panel:	Gelatin block			Temp:	65.3 °F
Obliquity:	0.0°	Primary Vel. Location (ft):	9.000	BP:	30 inHg
Backing Material:	Gelatin block	Range to Target (ft):	17.200	RH:	59.2%
Condition:	Conditioned per NIJ-STD-0101.06 Section 5 for 12 days/Submerged in water for 14 to 24 hours	Target to Witness (in):	0.000	Barrel/Gun:	CT-3091
				Gunner:	Ramon Chavez
				Recorder:	John Murray

Ammunition

Projectile	Lot No.	Powder
(1) 9-mm NATO, 124-grain FMJ	Federal	Accurate No. 2

Applicable Standards or Procedures

(1) FBI Test Protocol Version 4.1, dated 22 May 2014
(2) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Footnotes
1	1	3457	1446	2988	1450	1448	None	
2	1	3466	1443	2999	1445	1444	None	
3	1	3440	1453	2977	1455	1454	None	

Remarks:
Calibration of gelatin block: 3.25 in, Velocity: 589 ft/s on 9-9-14
Required velocity: 1375 to 1450 ft/s for control projectile.
Post weight: 2.69 lbs

Footnotes:

SURVIVAL ARMOR PROPRIETARY INFORMATION

National Institute of Justice (NIJ)
Approved Test Laboratory
For Personal Body Armor

Expiration Date:
April 30, 2016

National Technical Systems
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone (316) 832-1600 Fax (316) 832-1602
www.nts.com/locations/wichita

NVLAP®
NVLAP LAB CODE: 200818-0
Approved Signatory: Matthew Lutz

FLEXIBLE ARMOR: P-BFS TEST

Date Received: 01/30/14
Via: UPS
Returned Via: UPS

Record No.: SA14002
Test Date: 01/30/14
Customer: Survival Armor, Inc.

Test Conditions	Pre	
Temperature:	70	°F.
Humidity:	36	%
Clay Block No.:	9	
Clay Temp.:	98.3	°F.
Drops (Avg.):	19.91	mm
Test Spec.:	Modified/Abbreviated NIJ 0101.06	
Threat Level:	Special Threat	
Condition:	New	

Range 2

Muzzle to Screen 1:	5.42 ft.
Screen 1 - 2:	5.73 ft.
Screen 2 - Target:	5.29 ft.
Midpoint to Target:	8.16 ft.
Target to Witness:	0 ft.
Barrel Length:	4 in.
Clay Block:	5.5 in.

Sample Description			Test / Ammunition Description						Chronograph		Results
Model Number	Panel Weight (lbs.)	Panel Size	Wet Dry	Degree Obliquity	Shot No.	Shot Location	Caliber	Bullet Weight / Type	TIME sx-5	VELOCITY fps	Perforation BFS (mm)
LW-IIIA	1.98	2015-2015	Wet	0	1	1	5.7x28mm	40/Blue Tip	339.4	1688	20.47
LW-IIIA	1.98	2015-2015	Wet	0	2	2	5.7x28mm	40/Blue Tip	331.0	1731	18.65
LW-IIIA	1.98	2015-2015	Wet	0	3	3	5.7x28mm	40/Blue Tip	332.7	1722	20.45
LW-IIIA	1.98	2015-2015	Wet	45	4	4	5.7x28mm	40/Blue Tip	332.0	1725	No Perforation
LW-IIIA	1.98	2015-2015	Wet	30	5	5	5.7x28mm	40/Blue Tip	332.4	1723	No Perforation
LW-IIIA	1.98	2015-2015	Wet	0	6	6	5.7x28mm	40/Blue Tip	334.3	1713	No Perforation
										-	
										-	
										-	
										-	

This test report may not be used to claim product certification, approval, or endorsement by NVLAP, NIST, NIJ or any agency of the Federal Government. This report contains data that are not covered by the NVLAP accreditation. This test was performed in accordance with the specification requirements listed in addition to any customer testing modifications or requests. The test results properly reflect the ballistic performance of the listed sample. This test report shall not be reproduced except in full without written approval of National Technical Systems.

Test Remarks/Notes:

Test Round Used:
FNH 5.7x28 SS 197, 40gr (Blue Tip) @ factory velocity.

Sample Tested:

Manufacturer:	Survival Armor, Inc.
Model No.:	LW-IIIA
Style:	Male
Sample No.:	224526
Size:	2015-2015
Weight (lbs.):	1.98
Threat Level:	IIIA
DoM:	1/24/2014
Panel Side:	Front

Sample Description:
No sample description per customer request.

Project Manager: Nguyen
Range Technician(s): Zerger/Wilson

National Institute of Justice (NIJ)
Approved Test Laboratory
For Personal Body Armor

Expiration Date:
April 30, 2016

National Technical Systems
7447 W. 33rd St. N.
Wichita, KS 67205 U.S.A.
Phone (316) 832-1600 Fax (316) 832-1602
www.nts.com/locations/wichita

NVLAP®
NVLAP LAB CODE: 200818-0
Approved Signatory: Matthew Lutz

Record No.: SA14002

Scope of Accreditation for Personal Body Armor Testing:
Effective Dates: 2013-10-1 through 2014-9-30

NVLAP Code:	Test Method Designation:	Test Method Description
29/A01	NIJ 0101.06, July 2008, Section 7	Ballistic Resistance of Body Armor, Section 7: Ballistic Test Methods
29/A02	NIJ 0101.04, Rev. 2001	Ballistic Resistance of Personal Body Armor
29/B01	NIJ 0101.06, July 2008, Section 5	Ballistic Resistance of Body Armor, Section 5: Flexible Armor Conditioning Protocol
29/B02	NIJ 0101.06, July 2008, Section 6	Ballistic Resistance of Body Armor, Section 6: Hard Armor Conditioning Protocol
29/C01	NIJ 0115.00	Stab Resistance of Personal Body Armor

Test Methods Used:

1) Backing Material Surface Preparation (Section 4.2.5.4): Planar

2) Strapping Method (Section 7.7.2.1): (Figure 13. A) Standard Strapping Arrangement for Smaller Samples:
Two vertical straps and three horizontal straps

3) Shot-to-edge spacing: 2.0 - 2.75" Shot-to-shot spacing: 2.0" minimum

4) Shot locations marked per Section 7.8.1

5) Panel tested according to Section 7.8.2 Armor Submersion.

Customer Specified Testing Instructions:
1.Customer requested threat 1 shot to edge distance.

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems, Wichita Division
Report Identification Number: 13N019
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002212
Manufacturer: Survival Armor

Report Date: 01/07/14
NIJ Armor Type: 3A

Threat 1 - New Armor
Ammunition: .357 SIG 125/FMJ
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1			Size: C-5					Sample 2			Size: C-5				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1490	0	28.08		1480	0	29.82		1464	0	29.86		1476	0	27.35	
2	1462	0	33.02		1462	0	30.45		1462	0	29.01		1450	0	27.95	
3	1470	0	30.17		1461	0	29.33		1475	0	33.36		1479	0	29.5	
4	1468	0			1482	0			1488	0			1465	0		
5	1477	0			1474	0			1481	0			1477	0		
6	1441	0			1453	0			1449	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 29.83 mm
St. Dev: 1.83195 mm

	Sample 3			Size: C-1					Sample 4			Size: C-1				
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1470	0	28.07		1482	0	30.17		1473	0	29.25		1473	0	29.13	
2	1471	0	28.5		1467	0	27.57		1495	0	29.46		1486	0	29.35	
3	1448	0	27.76		1449	0	30.39		1458	0	29.21		1473	0	28.72	
4	1459	0			1466	0			1477	0			1455	0		
5	1466	0			1446	0			1461	0			1464	0		
6	1463	0			1475	0			1469	0			1473	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 30.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 28.97 mm
St. Dev: 0.88007 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 5 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1444	0	37.58		1427	0	39.82	
2	1441	0	39.96		1424	0	41.3	
3	1438	0	39.13		1430	0	39.22	
4	1437	0			1421	0		
5	1441	0			1425	0		
6	1446	0			1444	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 44.4 mm
Pass - BFS within Tolerance Limit

Shot Number	Sample 6 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1446	0	44.44		1453	0	36.55	
2	1440	0	36.82		1446	0	36.07	
3	1434	0	38.4		1443	0	38.87	
4	1442	0			1426	0		
5	1416	0			1427	0		
6	1431	0			1450	0		
7								
8								

BFS Statistics: Count: 12
k1: 1.568
Average: 39.01 mm
St. Dev: 2.30166 mm
Upper Tolerance Limit (80%/95%): 42.6 mm

Shot Number	Sample 7 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1416	0	39.41		1431	0	39.36	
2	1418	0	37.95		1450	0	39.1	
3	1431	0	38.7		1422	0	37.8	
4	1444	0			1428	0		
5	1453	0			1427	0		
6	1453	0			1432	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 40.8 mm
(Pass - No BFS greater than 44 mm)

Shot Number	Sample 8 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1421	0	40.85		1437	0	40.39	
2	1436	0	37.23		1426	0	37.71	
3	1431	0	37.17		1444	0	38.86	
4	1433	0			1422	0		
5	1429	0			1421	0		
6	1434	0			1422	0		
7								
8								

BFS Statistics: Count: 12
Average: 38.71 mm
St. Dev: 1.1854 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ **Test Velocity:** 1410 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1448	0	28.24		1405	0	29.4		1412	0	29.54		1424	0	27.75	
2	1417	0	29.85		1435	0	33.74		1410	0	30.46		1418	0	28.48	
3	1425	0	33.74		1411	0	33.5		1427	0	30.97		1427	0	29.67	
4	1417	0			1425	0			1426	0			1431	0		
5	1426	0			1400	0			1429	0			1430	0		
6	1400	0			1413	0			1420	0			1409	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 33.74 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 30.97 mm (no requirement)							

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP **Test Velocity:** 1340 ± 30 ft/s **Conditioning:** Conditioned

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1343	0	34.9		1344	0	36.44		1348	0	39.44		1341	0	35.72	
2	1343	0	39.36		1335	0	42.39		1362	0	38.12		1347	0	38.06	
3	1351	0	39.99		1342	0	42.29		1346	0	42.12		1339	0	37.78	
4	1331	0			1340	0			1344	0			1319	0		
5	1331	0			1335	0			1345	0			1326	0		
6	1340	0			1344	0			1340	0			1342	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 42.39 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 42.12 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: **44.4 mm** **Maximum Upper Tolerance Limit (80% probability with 95% confidence):** **42.6 mm**
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item b.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1456	0		1472	0	
2	1577	0		1570	0	
3	1667	0		1682	0	
4	1721	0		1770	0	
5	1807	0		1861	1	
6	1886	1		1780	0	
7	1851	1		1841	1	
8	1758	0		1785	0	
9	1802	0		1850	0	
10	1858	0		1878	0	
11	1833	0		1942	1	
12	1949	0		1877	1	
13						
14						
15						

Shot Number	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1467	0		1471	0	*Panel tested on 1/4/13 on Range 2
2	1554	0		1599	0	Crawford/Childers/Nguyen
3	1660	0		1666	0	
4	1773	0		1777	0	
5	1874	1		1858	1	
6	1793	0		1805	1	
7	1840	0		1718	0	
8	1881	0		1768	0	
9	1926	0		1779	0	
10	1928	1		1866	0	
11	1911	0		1904	0	
12	1927	0		1906	0	
13						
14						
15						

Shot Number	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1477	0	
2	1581	0	
3	1690	0	
4	1766	0	
5	1814	1	
6	1799	1	
7	1718	0	
8			*No reading due to chronograph error.
9	1763	0	Repeated same charge at new location.
10	1813	0	
11	1839	0	
12	1906	0	
13	1968	0	
14			
15			

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1453	0	*Switched to 14" barrel due to excessive
2	1573	0	chamber pressures.
3	1663	0	
4	1746	0	
5	1822	0	
6	1901	1	
7	1838	1	
8	1801	0	
9	1833	0	
10	1904	0	
11	1919	1	
12	1889	0	
13			
14			
15			

Shot Number	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1448	0	
2	1575	0	
3	1663	0	
4	1749	1	
5	1656	0	
6	1743	0	
7	1785	0	
8	1813	0	
9	1884	1	
10	1823	0	
11	1881	0	
12	1901	0	
13			
14			
15			

Shot Number	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1465	0	
2	1561	0	
3	1676	0	
4	1774	0	
5	1861	0	
6	1959	1	
7	1867	1	
8	1769	0	
9	1853	0	
10	1922	0	
11	1936	1	
12	1908	1	
13			
14			
15			

Shot Number	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1449	0	
2	1591	0	
3	1684	0	
4	1769	0	
5	1832	1	
6	1761	0	
7	1813	0	
8	1894	0	
9	1909	1	
10	1875	0	
11	1923	0	
12	1983	0	
13			
14			
15			

Shot Number	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1452	0	
2	1567	0	
3	1665	0	
4	1753	0	
5	1859	0	
6	1950	1	
7	1863	1	
8	1788	1	
9	1734	0	
10	1757	0	
11	1851	0	
12	1882	0	
13			
14			
15			

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	26	Requires review
Stops (Partial Penetrations)	94	Acceptable
Perforations below 1500 ft/s:	0	Acceptable

Regression Analysis

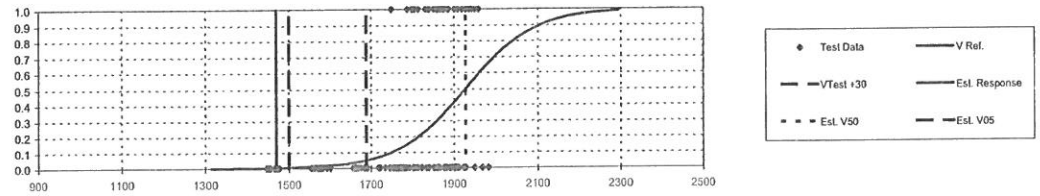
Regression Model: Logistic

Estimated V50: 1927 ft/s

Estimated V05: 514.5 m/s (1688) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): 0.36% Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1425	0		1425	0		1435	0		1437	0		1430	0	
2	1526	0		1531	0		1521	0		1515	0		1520	0	
3	1629	0		1609	0		1632	0		1615	0		1608	0	
4	1715	0		1707	0		1692	0		1710	0		1717	0	
5	1739	0		1800	1		1746	0		1795	1		1792	1	
6	1820	1		1724	1		1821	1		1709	1		1708	1	
7	1743	1		1634	0		1739	1		1643	0		1633	0	
8	1664	1		1696	0		1665	1		1694	0		1690	0	
9	1573	0		1730	0		1566	0		1743	1		1726	0	
10	1642	0		1799	1		1627	0		1676	0		1779	1	
11	1688	0		1743	1		1701	0		1748	1		1719	1	
12	1746	0		1686	0		1760	0		1697	0		1711	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1455	0		1451	0		1431	0		1450	0		1440	0	
2	1507	0		1518	0		1514	0		1530	0		1519	0	
3	1633	0		1601	0		1625	0		1622	0		1615	0	
4	1687	0		1709	0		1713	0		1701	0		1714	1	
5	1799	0		1803	1		1800	0		1802	0		1630	0	
6	1859	1		1736	1		1879	1		1880	1		1688	0	
7	1802	1		1643	0		1808	1		1796	1		1738	1	
8	1724	1		1692	1		1737	0		1733	0		1690	1	
9	1639	0		1639	0		1762	1		1774	1		1646	0	
10	1679	1		1701	1		1700	1		1719	0		1695	1	
11	1628	0		1640	0		1664	0		1767	0		1646	0	
12	1696	0		1700	0		1725	1		1844	1		1692	0	
13															
14															
15															

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	39	Acceptable
Stops (Partial Penetrations):	81	Acceptable
Perforations below 1460 ft/s:	0	Acceptable

Regression Analysis

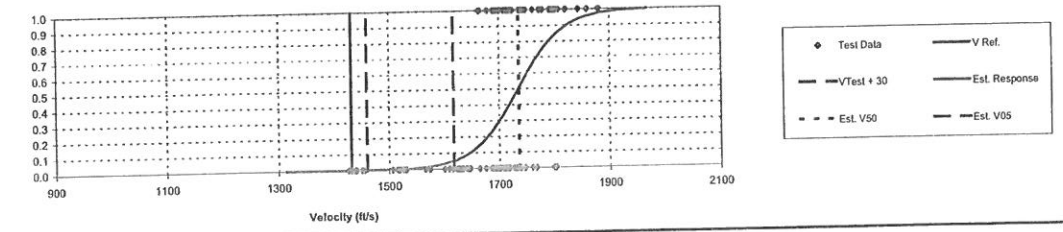
Regression Model: Logistic

Estimated V50: 1735 ft/s

Estimated V05: 492.8 m/s (1617) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): 0.05% Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Remarks
1	1406	0		1408	0	
2	1515	0		1547	0	
3	1636	0		1651	0	
4	1736	0		1697	0	
5	1788	1		1800	0	
6	1694	0		1892	0	
7	1776	0		1955	1	
8	1807	1		1891	1	
9	1756	0		1780	0	
10	1833	0		1851	0	
11	1892	1		1874	1	
12	1804	0		1809	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1855 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Remarks
1	1346	0		1368	0	
2	1447	0		1443	0	
3	1549	1		1519	0	
4	1451	0		1624	0	
5	1510	0		1710	1	
6	1547	0		1656	0	
7	1612	0		1679	0	
8	1675	0		1732	1	
9	1694	0		1687	0	
10	1765	1		1739	1	
11	1704	1		1695	0	
12	1642	0		1721	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1718 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditione

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Probability of perforation at the P-BFS reference velocity This requirement is for New armors only

Threat 1: 0.36%
Threat 2: 0.05%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

NTS

www.nts.com

January 8, 2014

Mr. Ken Mueller
Survival Armor Inc.
12621 Corporate Lakes Dr. Unit 8
Fort Myers, FL 33913

Dear Mr. Mueller:

In accordance with your instructions, National Technical Systems, Inc. conducted Ballistic Resistance Testing of body armor submitted by **Survival Armor Test ID # SUR09-002212,** which were received on December 26th and December 31st, 2013. Testing was witnessed by Ken Mueller, a representative of the manufacturer.

The testing, which was authorized by NLECTC, was conducted in accordance with the requirements of NIJ Standard-0101.06, Ballistic Resistance Testing of Police Body Armor, dated July, 2008, and all changes, verbal and written, authorized by NLECTC as of the date of the testing. The results of this test are to be used to determine the compliance of the armor in conjunction with the U. S. Department of Justice's voluntary compliance testing program for armor intended for use by Law Enforcement officers. National Technical Systems, Inc. is not empowered to issue or deny this compliance status; however, the attached data indicates that this sampling of **Test ID # SUR09-002212** did **satisfy** the ballistic requirement of NIJ Standard-0101.06 prerequisites to issuance of compliance status for **threat level IIIA** protection.

In addition to the required ballistic test data that has been provided on the official Compliance Test Report (form provided/mandated by NLECTC). The testing included:

Flexible Armor Conditioning Protocol. Conditioned in accordance with Section 5.
Label Permanency and Durability Section 4.1.5.3. Results: PASS

As required, two complete test samples and a copy of this report are being forwarded to NLECTC. The remaining samples will be returned to you via UPS Ground. Please refer to **NTS report number 13N019** for test details.

Sincerely,

Matt Lutz
Division Manager

National Technical Systems, Inc.

7447 W. 33rd Street N., Wichita, KS 67205 Main: 316-832-1600 Fax: 316-832-1602

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: National Technical Systems, Wichita Division
Report Identification Number: 13N019
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Test ID: SUR09-002212
Manufacturer: Survival Armor

Report Date: 01/07/14
NIJ Armor Type: 3A

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

	Sample 1 Size: C-5								Sample 2 Size: C-5							
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1490	0	28.08		1480	0	29.82		1464	0	29.86		1476	0	27.35	
2	1462	0	33.02		1462	0	30.45		1462	0	29.01		1450	0	27.95	
3	1470	0	30.17		1461	0	29.33		1475	0	33.36		1479	0	29.5	
4	1468	0			1482	0			1488	0			1465	0		
5	1477	0			1474	0			1481	0			1477	0		
6	1441	0			1453	0			1449	0			1450	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 29.83 mm
St. Dev: 1.83195 mm

	Sample 3 Size: C-1								Sample 4 Size: C-1							
	Front Panel				Back Panel				Front Panel				Back Panel			
Shot Number	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1470	0	28.07		1482	0	30.17		1473	0	29.25		1473	0	29.13	
2	1471	0	28.5		1467	0	27.57		1495	0	29.46		1486	0	29.35	
3	1448	0	27.76		1449	0	30.39		1458	0	29.21		1473	0	28.72	
4	1459	0			1466	0			1477	0			1455	0		
5	1466	0			1446	0			1461	0			1464	0		
6	1463	0			1475	0			1469	0			1473	0		
7																
8																

Summary: Perforations: 0 (Pass)
Maximum BFS: 30.4 mm
Pass - No BFS greater than 44 mm

BFS Statistics: Count: 12
Average: 28.97 mm
St. Dev: 0.88007 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 2 - New Armor

Ammunition: .44 Mag 240/SJHP

Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Shot Number	Sample 5 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1444	0	37.58		1427	0	39.82	
2	1441	0	39.96		1424	0	41.3	
3	1438	0	39.13		1430	0	39.22	
4	1437	0			1421	0		
5	1441	0			1425	0		
6	1446	0			1444	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 44.4 mm
Pass - BFS within Tolerance Limit

Shot Number	Sample 6 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1446	0	44.44		1453	0	36.55	
2	1440	0	36.82		1446	0	36.07	
3	1434	0	38.4		1443	0	38.87	
4	1442	0			1426	0		
5	1416	0			1427	0		
6	1431	0			1450	0		
7								
8								

BFS Statistics: Count: 12
k1: 1.568
Average: 39.01 mm
St. Dev: 2.30166 mm
Upper Tolerance Limit (80%/95%): 42.6 mm

Shot Number	Sample 7 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1416	0	39.41		1431	0	39.36	
2	1418	0	37.95		1450	0	39.1	
3	1431	0	38.7		1422	0	37.8	
4	1444	0			1428	0		
5	1453	0			1427	0		
6	1453	0			1432	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 40.8 mm
(Pass - No BFS greater than 44 mm)

Shot Number	Sample 8 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1421	0	40.85		1437	0	40.39	
2	1436	0	37.23		1426	0	37.71	
3	1431	0	37.17		1444	0	38.86	
4	1433	0			1422	0		
5	1429	0			1421	0		
6	1434	0			1422	0		
7								
8								

BFS Statistics: Count: 12
Average: 38.71 mm
St. Dev: 1.1854 mm

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor
Test Velocity: 1410 ± 30 ft/s

Conditioning: Conditioned

Ammunition: .357 SIG 125/FMJ

Size: C-5

Shot Number	Sample 21 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1448	0	28.24		1405	0	29.4	
2	1417	0	29.85		1435	0	33.74	
3	1425	0	33.74		1411	0	33.5	
4	1417	0			1425	0		
5	1426	0			1400	0		
6	1400	0			1413	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 33.74 mm (no requirement)

Size: C-1

Sample 22 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1412	0	29.54		1424	0	27.75	
1410	0	30.46		1418	0	28.48	
1427	0	30.97		1427	0	29.67	
1426	0			1431	0		
1429	0			1430	0		
1420	0			1409	0		

Perforations: 0 (Pass)
Maximum BFS: 30.97 mm (no requirement)

Threat 2 - Conditioned Armor
Test Velocity: 1340 ± 30 ft/s

Conditioning: Conditioned

Ammunition: .44 Mag 240/SJHP

Size: C-5

Shot Number	Sample 23 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1	1343	0	34.9		1344	0	36.44	
2	1343	0	39.36		1335	0	42.39	
3	1351	0	39.99		1342	0	42.29	
4	1331	0			1340	0		
5	1331	0			1335	0		
6	1340	0			1344	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 42.39 mm (no requirement)

Size: C-1

Sample 24 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note	Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	BFS (mm)	Note
1348	0	39.44		1341	0	35.72	
1362	0	38.12		1347	0	38.06	
1346	0	42.12		1339	0	37.78	
1344	0			1319	0		
1345	0			1326	0		
1340	0			1342	0		

Perforations: 0 (Pass)
Maximum BFS: 42.12 mm (no requirement)

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: **44.4 mm**
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item b.

Maximum Upper Tolerance Limit (80% probability with 95% confidence): **42.6 mm**

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .357 SIG 125/FMJ

Threat 1 - New Armor
Test Velocity: 1470 ± 30 ft/s

Conditioning: New

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1456	0	
2	1577	0	
3	1667	0	
4	1721	0	
5	1807	0	
6	1886	1	
7	1851	1	
8	1758	0	
9	1802	0	
10	1858	0	
11	1833	0	
12	1949	0	
13			
14			
15			

Shot Number	Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1472	0	
2	1570	0	
3	1682	0	
4	1770	0	
5	1861	1	
6	1780	0	
7	1841	1	
8	1785	0	
9	1850	0	
10	1878	0	
11	1942	1	
12	1877	1	
13			
14			
15			

Shot Number	Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1467	0	
2	1554	0	
3	1660	0	
4	1773	0	
5	1874	1	
6	1793	0	
7	1840	0	
8	1881	0	
9	1926	0	
10	1928	1	
11	1911	0	
12	1927	0	
13			
14			
15			

Shot Number	Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1471	0	*Panel tested on 1/4/13 on Range 2 Crawford/Childers/Nguyen
2	1599	0	
3	1666	0	
4	1777	0	
5	1858	1	
6	1805	1	
7	1718	0	
8	1768	0	
9	1779	0	
10	1866	0	
11	1904	0	
12	1906	0	
13			
14			
15			

Shot Number	Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1477	0	
2	1581	0	
3	1690	0	
4	1766	0	
5	1814	1	
6	1799	1	
7	1718	0	
8			*No reading due to chronograph error. Repeated same charge at new location.
9	1763	0	
10	1813	0	
11	1839	0	
12	1906	0	
13	1968	0	
14			
15			

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1453	0	*Switched to 14" barrel due to excessive chamber pressures.
2	1573	0	
3	1663	0	
4	1746	0	
5	1822	0	
6	1901	1	
7	1838	1	
8	1801	0	
9	1833	0	
10	1904	0	
11	1919	1	
12	1889	0	
13			
14			
15			

Shot Number	Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1446	0	
2	1575	0	
3	1663	0	
4	1749	1	
5	1656	0	
6	1743	0	
7	1785	0	
8	1813	0	
9	1884	1	
10	1823	0	
11	1881	0	
12	1901	0	
13			
14			
15			

Shot Number	Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1465	0	
2	1561	0	
3	1676	0	
4	1774	0	
5	1861	0	
6	1959	1	
7	1867	1	
8	1769	0	
9	1853	0	
10	1922	0	
11	1936	1	
12	1908	1	
13			
14			
15			

Shot Number	Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1449	0	
2	1591	0	
3	1684	0	
4	1769	0	
5	1832	1	
6	1761	0	
7	1813	0	
8	1894	0	
9	1909	1	
10	1875	0	
11	1923	0	
12	1983	0	
13			
14			
15			

Shot Number	Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1452	0	
2	1567	0	
3	1665	0	
4	1753	0	
5	1859	0	
6	1950	1	
7	1863	1	
8	1788	1	
9	1734	0	
10	1757	0	
11	1851	0	
12	1882	0	
13			
14			
15			

Perforations below 1500 ft/s: 0 Acceptable

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	26	Requires review
Stops (Partial Penetrations):	94	Acceptable

Regression Analysis

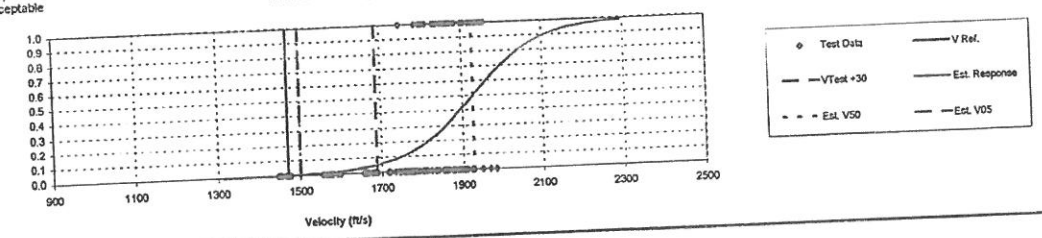
Regression Model: Logistic

Estimated V50: 1927 ft/s

Estimated V05: 514.5 m/s (1688) ft/s

Probability of perforation at NIJ reference velocity (1470 ft/sec): 0.36% Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Ammunition: .44 Mag 240/SJHP

Threat 2 - New Armor
Test Velocity: 1430 ±30 ft/s

Conditioning: New

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1425	0		1425	0		1435	0		1437	0		1430	0	
2	1526	0		1531	0		1521	0		1515	0		1520	0	
3	1629	0		1609	0		1632	0		1615	0		1608	0	
4	1715	0		1707	0		1692	0		1710	0		1717	0	
5	1739	0		1800	1		1746	0		1795	1		1792	1	
6	1820	1		1724	1		1821	1		1709	1		1708	1	
7	1743	1		1634	0		1739	1		1643	0		1633	0	
8	1664	1		1695	0		1665	1		1694	0		1690	0	
9	1573	0		1730	0		1566	0		1743	1		1726	0	
10	1642	0		1799	1		1627	0		1676	0		1779	1	
11	1688	0		1743	1		1701	0		1748	1		1719	1	
12	1746	0		1686	0		1760	0		1697	0		1711	0	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1455	0		1451	0		1431	0		1450	0		1440	0	
2	1507	0		1518	0		1514	0		1530	0		1519	0	
3	1633	0		1601	0		1625	0		1622	0		1615	0	
4	1687	0		1709	0		1713	0		1701	0		1714	1	
5	1799	0		1803	1		1800	0		1802	0		1630	0	
6	1659	1		1736	1		1879	1		1860	1		1688	0	
7	1802	1		1643	0		1808	1		1796	1		1738	1	
8	1724	1		1692	1		1737	0		1733	0		1690	1	
9	1639	0		1639	0		1762	1		1774	1		1646	0	
10	1679	1		1701	1		1700	1		1719	0		1695	1	
11	1628	0		1640	0		1654	0		1767	0		1646	0	
12	1695	0		1700	0		1725	1		1844	1		1692	0	
13															
14															
15															

Perforations below 1460 ft/s: 0 Acceptable

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	39	Acceptable
Stops (Partial Penetrations):	81	Acceptable

Regression Analysis

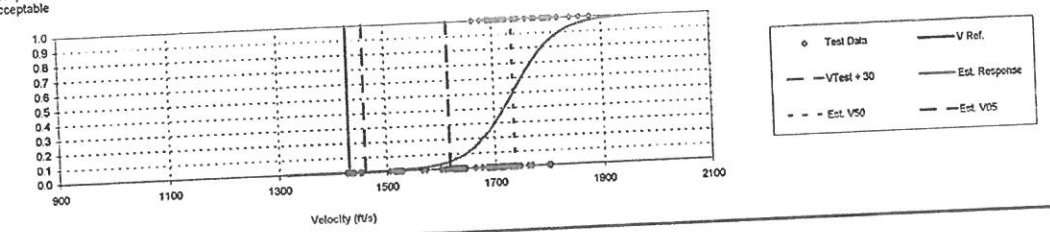
Regression Model: Logistic

Estimated V50: 1735 ft/s

Estimated V05: 492.8 m/s (1617) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): 0.05% Acceptable

Test Data and Regression Model



NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

Threat 1 - Conditioned Armor

Ammunition: .357 SIG 125/FMJ
Test Velocity: 1410 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1406	0		1408	0	
2	1515	0		1547	0	
3	1636	0		1651	0	
4	1736	0		1697	0	
5	1788	1		1800	0	
6	1694	0		1892	0	
7	1776	0		1955	1	
8	1807	1		1891	1	
9	1756	0		1780	0	
10	1833	0		1851	0	
11	1892	1		1874	1	
12	1804	0		1809	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1440 ft/s:	0	Acceptable

Estimated V50: 1855 ft/s

Threat 2 - Conditioned Armor

Ammunition: .44 Mag 240/SJHP
Test Velocity: 1340 ± 30 ft/s Cond: Conditioned

Shot Number	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1346	0		1368	0	
2	1447	0		1443	0	
3	1549	1		1519	0	
4	1451	0		1624	0	
5	1510	0		1710	1	
6	1547	0		1658	0	
7	1612	0		1679	0	
8	1675	0		1732	1	
9	1694	0		1687	0	
10	1765	1		1739	1	
11	1704	1		1695	0	
12	1642	0		1721	0	
13						
14						
15						

Summary:

Total Usable Shots:	24	Acceptable
Perforations (CP):	6	
Stops (PP):	18	
Perforations below 1370 ft/s:	0	Acceptable

Estimated V50: 1718 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditioned

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

This requirement is for New armors only

Probability of perforation at the P-BFS reference velocity
Threat 1: 0.36%
Threat 2: 0.05%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

Compliance Test Report revision NIJ 0101.06 CTR 2-22 (2013-05-31) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

Mike Amory - 304-925-0305
6601 MacCorkle Ave SE Charleston, WV 25304
WV VEDOR# VC0000010150

Modern Firearms of Chattanooga, LLC

ATTACHED SPECIFICATIONS & PRICING
CRFQ_DPS1500000008

Choice of:
Level II Soft Armor $655.35
Level IIIA Soft Armor $755.35



VERTEX CARRIER
The top-of-the-line in concealable carriers, Survival Armor's Vertex carrier is designed with comfort in mind. The Vertex is available with all of our ballistic packages.

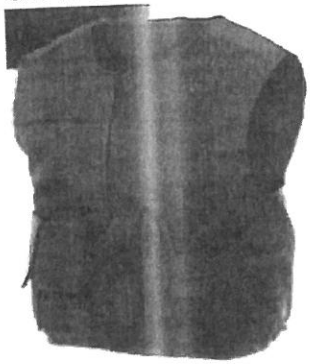
- Super Mini-Rip Stop outer fabric
- Climate Control, Odor Resistant & Anti-Microbial moisture management system
- Dual 5" x 8" & 7" x 9" stealth plate pockets
- LDSS, patented load distributing strapping system

OPTIONS:
- Tails, Hard or Soft plate inserts
- Back plate pocket

Comes With:
TWO Vertex Carriers
5x8 Soft Trauma Pac
5x8 L7 STP

NOTE: For $48.00 more you can substitute one of the Vertex carriers for one of the below Tactical Carriers

OC TACTICAL CARRIER



DHS TACTICAL CARRIER



Mike Amory - 304-925-0305
6601 MacCorkle Ave SE Charleston, WV 25304
WV VEDOR# VC0000010150

Modern Firearms of Chattanooga, LLC

ADDITIONAL ITEMS:

OC or DHS TACTICAL CARRIER	$145.00 EACH
VERTEX CARRIER	$95.00 EACH
GUNSHOT MEDICAL KIT	$95.00 EACH

*These prices, unless directly stated that they cannot be by the State of West Virginia, will be offered to all Law Enforcement agencies, Fire, EMS and government agencies in the state of West Virginia.

Some of the Agencies using Survival Armor:

Department of Homeland Security, Department of State, Lexington Metro PD (females), Lansing PD, Columbus PD, Franklin Co SO, Hilliard PD, Westerville PD, Upper Arlington PD, Grandview Heights PD, Dublin PD, Perry Twp PD, Gahanna PD, Hocking Co SO, Ohio Univ PD, Athens Co SO, Dayton PD, Dayton Airport PD, Springfield PD, Huber Heights PD, Cincinnati PD, Hamilton Co SO, Mason PD, Delhi Twp PD, Marion Co SO, Delaware PD, Richland Co SO, Canton Fire, North Canton PD, Akron PD, Cuyahoga Falls PD, Richfield PD, Stark Co SO, Ohio State Highway Patrol

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

October 8, 2014

Ken Mueller
Director of Operations / R&D
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-FEM-IIIA
NIJ Compliance Status Expires: October 8, 2019

Dear Mr. Mueller:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

All compliance requirements, as identified by the *NIJ Body Armor Compliance Testing Program Administrative Manual* and the *Ballistic Body Armor Applicant Package*, must be maintained as long as the NIJ Statement of Compliance is displayed on this armor model's labels. If, at any time, the compliance status of this armor model is changed, the NIJ Statement of Compliance shall cease to be used as of the date of the status change.

Sincerely,

Michael K O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

U.S. Department of Justice

Office of Justice Programs

National Institute of Justice

Washington, D.C. 20530

February 25, 2014

Ken Mueller
Director of Operations / R&D
Survival Armor, Inc.
13881 Plantation Road, Unit 8
Fort Myers, FL 33912

Notice of Compliance with NIJ Standard–0101.06
Body Armor Model Designation: LW-IIIA
NIJ Compliance Status Expires: February 25, 2019

Dear Mr. Mueller:

We have completed our evaluation of the body armor model identified above that was submitted to the National Institute of Justice's (NIJ's) Voluntary Body Armor Compliance Testing Program. We are pleased to inform you that the above body armor model satisfies the requirements of NIJ Standard–0101.06 and the Compliance Testing Program.

We also received your completed declaration concerning the model noted above and your agreement to participate in the conformity assessment follow-up process.

The body armor model details are listed on the NIJ Compliant Products List available at www.justnet.org/CTP.

You are now authorized to place the NIJ Statement of Compliance on the labels of this body armor model and all subsequent production units. The Statement of Compliance shall read:

"This model of armor has been determined to comply with NIJ Standard–0101.06 by the NIJ Compliance Testing Program and is listed on the NIJ Compliant Products List."

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Sincerely,

Michael K. O'Shea

Michael K. O'Shea
Law Enforcement Program Manager
US Department of Justice
OJP/NIJ/OST/Operational Technologies Division

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

NVLAP Lab Code: 200818-0
60

Ballistic Limit Summary Data

Report Date: 09/25/12

NIJ Armor Type: 2

Manufacturer: Survival Armor, Inc.

Threat 1 - New Armor
Test Velocity: 1305 ± 30 ft/s

Conditioning: New

Ammunition: 9mm 124/FMJ

Key to Remarks:
a - Too close to edge
b - Too close to prior impact
c - Impact on seam

Shot Number	Sample 11 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1278	0	
2	1405	0	
3	1531	0	
4	1614	0	
5	1709	1	
6	1641	1	
7	1580	0	
8	1599	0	
9	1671	1	
10	1622	0	
11	1649	0	
12	1737	1	
13			
14			
15			

Sample 11 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1288	0	
1432	0	
1530	0	
1635	0	
1734	1	
1635	1	
1553	0	
1621	0	
1682	0	
1745	1	
1691	1	
1631	1	

Sample 12 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1332	0	
1460	0	
1516	0	
1641	0	
1723	1	
1655	0	
1726	1	
1655	0	
1696	0	
1740	0	
1788	1	
1821	1	

Sample 12 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1288	0	
1405	0	
1527	0	
1598	0	
1735	1	
1651	0	
1707	0	
1757	1	
1682	0	
1742	0	
1778	1	
1748	0	

Sample 13 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1313	0	
1390	0	
1536	0	
1617	0	
1726	1	
1648	1	
1578	0	
1630	0	
1660	0	
1698	1	
1687	1	
1639	0	

Shot Number	Sample 13 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1291	0	
2	1399	0	
3	1504	0	
4	1632	0	
5	1728	0	
6	1719	0	
7	1876	0	
8	1929	1	
9	1876	1	
10	1850	1	
11	1780	0	
12	1822	0	
13			
14			
15			

Sample 14 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1285	0	
1412	0	
1527	0	
1651	0	
1729	1	
1646	0	
1716	1	
1635	0	
1701	0	
1764	1	
1681	1	
1653	0	

Sample 14 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1276	0	
1381	0	
1522	0	
1647	0	
1719	1	
1670	1	
1561	0	
1601	0	
1720	0	
1729	0	
1784	1	
1745	0	

Sample 15 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1299	0	
1431	0	
1508	0	
1644	1	
1543	0	
1621	0	
1663	0	
1705	0	
1752	1	
1700	0	
1771	0	
1707	0	

Sample 15 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1279	0	
1396	0	
1537	0	
1620	0	
1700	1	
1640	0	
1700	0	
1745	0	
1784	1	
1733	1	
1703	0	
1742	0	

Perforations below 1335 ft/s: 0 Acceptable

Summary:

Total Usable Shots:	120	Acceptable
Perforations (Complete Penetrations):	35	Acceptable
Stops (Partial Penetrations)	85	Acceptable

Regression Analysis

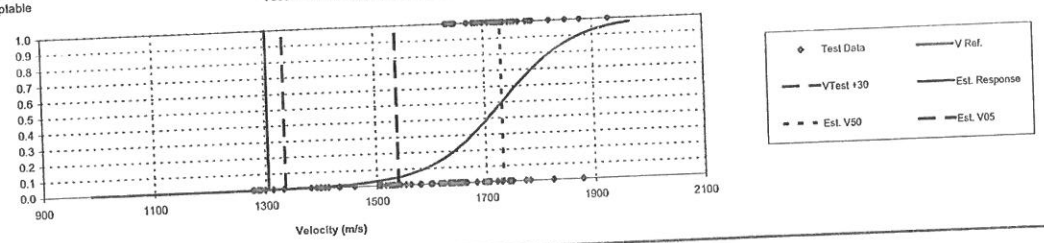
Regression Model: Logistic

Estimated V50: 1731 ft/s

Estimated V05: 469.2 m/s (1539) ft/s

Probability of perforation at NIJ reference velocity (1305 ft/sec): 0.14% Acceptable

Test Data and Regression Model



For Test Laboratory Use

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 60 — 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

NIJ Armor Type: 2

Manufacturer: Survival Armor, Inc.

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Ammunition: .357 Mag 158/JSP

Shot Number	Sample 16 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 16 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 17 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 18 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1434	0		1430	0		1459	0		1448	0		1420	0	
2	1509	0		1505	1		1526	0		1527	0		1502	0	
3	1610	0		1445	0		1592	0		1601	0		1602	0	
4	1671	1		1510	0		1682	1		1690	1		1683	0	
5	1628	1		1545	0		1645	1		1632	1		1730	1	
6	1564	0		1585	1		1591	0		1598	0		1711	1	
7	1628	1		1557	0		1622	1		1614	0		1656	1	
8	1571	0		1581	0		1573	0		1651	1		1602	0	
9	1604	0		1636	0		1622	0		1627	0		1638	0	
10	1645	0		1674	1		1660	1		1665	1		1666	1	
11	1705	1		1650	1		1594	1		1616	0		1630	1	
12	1666	1		1574	0		1568	1		1659	0		1604	1	
13															
14															
15															

Shot Number	Sample 18 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 19 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 20 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1404	0		1413	0		1430	0		1444	0		1414	0	
2	1527	0		1531	0		1528	1		1527	0		1525	0	
3	1597	1		1613	0		1413	0		1624	0		1620	1	
4	1554	0		1705	0		1482	0		1698	1		1572	0	
5	1599	0		1743	0		1554	0		1649	1		1582	1	
6	1652	0		1708	1		1586	0		1571	0		1554	0	
7	1684	1		1766	1		1638	1		1611	0		1588	0	
8	1638	1		1729	1		1554	0		1667	1		1636	0	
9	1595	0		1700	0		1642	0		1622	1		1661	0	
10	1631	1		1720	1		1669	0		1549	0		1716	0	
11	1584	0		1682	1		1717	1		1639	0		1746	1	
12	1642	0		1626	1		1667	1		1646	1		1717	1	
13															
14															
15															

Perforations below 1460 ft/s: 0 Acceptable

Summary:

Total Usable Shots: 120 Acceptable
Perforations (Complete Penetrations): 48 Acceptable
Stops (Partial Penetrations): 72 Acceptable

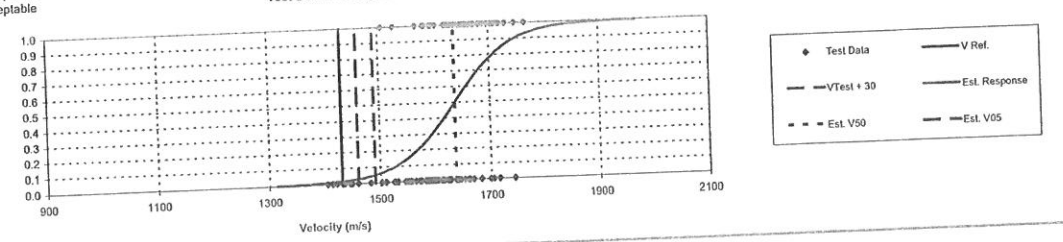
Regression Analysis
Regression Model: Logistic

Estimated V50: 1637 ft/s

Estimated V05: 454.1 m/s (1490) ft/s

Probability of perforation at NIJ reference velocity (1430 ft/sec): 1.57% Acceptable

Test Data and Regression Model



BL Summary (ft)

DRAFT NIJ CTR 2-19

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

For Test Laboratory Use

NVLAP Lab Code: 60 — 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Ballistic Limit Summary Data

Report Date: 09/25/12

NIJ Armor Type: 2

Manufacturer: Survival Armor, Inc.

Threat 1 - Conditioned Armor

Ammunition: 9mm 124/FMJ
Test Velocity: 1245 ± 30 ft/s — Cond: Conditioned

Shot Number	Sample 25 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 25 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1256	0		1274	0	
2	1399	0		1374	0	
3	1481	0		1453	0	
4	1599	1		1529	0	
5	1509	0		1621	1	
6	1531	0		1528	0	
7	1563	0		1573	0	
8	1646	0		1577	0	
9	1639	0		1636	0	
10	1711	1		1684	0	
11	1669	1		1724	1	
12	1637	1		1671	1	
13						
14						
15						

Summary:

Total Usable Shots: 24 Acceptable
Perforations (CP): 7
Stops (PP): 17

Perforations below 1275 ft/s: 0 Acceptable

Estimated V50: 1641 ft/s

Threat 2 - Conditioned Armor

Ammunition: .357 Mag 158/JSP
Test Velocity: 1340 ± 30 ft/s — Cond: Conditioned

Shot Num	Sample 26 Front Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks	Sample 26 Back Panel Avg. Vel. (ft/sec)	Perf (Y=1/N=0)	Remarks
1	1319	0		1359	0	
2	1442	0		1420	0	
3	1524	0		1560	1	
4	1624	1		1490	0	
5	1573	0		1536	0	
6	1630	1		1608	1	
7	1541	0		1563	1	
8	1630	1		1501	0	
9	1562	0		1572	0	
10	1614	1		1605	0	
11	1575	0		1653	1	
12	1588	0		1594	0	
13						
14						
15						

Summary:

Total Usable Shots: 24 Acceptable
Perforations (CP): 8
Stops (PP): 16

Perforations below 1370 ft/s: 0 Acceptable

Estimated V50: 1593 ft/s

Overall Ballistic Limit Summary

Perforations below Vref + 30 ft/sec: 0 This requirement is for all Ballistic Limit tested samples - New and Conditions

This armor model meets the low perforation velocity performance requirements of NIJ Standard-0101.06 Section 7.9.5.

This requirement is for New armors only

Probability of perforation at the P-BFS reference velocity

Threat 1: 0.14%
Threat 2: 1.57%

This armor model meets the estimated V05 performance requirements of NIJ Standard-0101.06 Section 7.9.5.

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Report Date: 09/25/12
NIJ Armor Type: 2

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Ammunition: 9mm 124/FMJ

Threat 1 - New Armor
Test Velocity: 1305 ± 30 ft/s

Conditioning: New

Sample 1 — Size: C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1338	0	31.1		1311	0	30.42	
2	1313	0	27.48		1320	0	33.95	
3	1309	0	29.7		1307	0	38.28	
4	1311	0		g	1314	0		
5	1308	0		g	1324	0		
6	1313	0			1328	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 38.3 mm
Pass - No BFS greater than 44 mm

Sample 2 — Size: C-5

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1309	0	29.18		1322	0	28.04	
1304	0	28.57		1315	0	31.09	
1317	0	25.2		1300	0	33.86	
1330	0		g	1316	0		
1300	0		g	1316	0		
1294	0			1286	0		

BFS Statistics: Count: 12
Average: 30.57 mm
St. Dev: 3.48687 mm

Sample 3 — Size: C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1286	0	35.74		1310	0	33.6	
2	1329	0	39.76		1320	0	32.15	
3	1324	0	35.84		1312	0	32.13	
4	1309	0		g	1296	0		
5	1353	0			1312	0		
6	1350	0			1319	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 39.8 mm
Pass - No BFS greater than 44 mm

Sample 4 — Size: C-1

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1316	0	35.53		1313	0	33.75	
1324	0	36.9		1302	0	32.01	
1303	0	36.88		1328	0	34.92	
1283	0		g	1302	0		
1311	0			1304	0		
1307	0			1301	0		

BFS Statistics: Count: 12
Average: 34.93 mm
St. Dev: 2.33769 mm

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Report Date: 09/25/12
NIJ Armor Type: 2

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Threat 2 - New Armor
Test Velocity: 1430 ± 30 ft/s

Conditioning: New

Ammunition: .357 Mag 158/JSP

Sample 5 — Size: C-5

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1446	0	34.16		1418	0	36.27	
2	1444	0	33.81		1445	0	35.62	
3	1444	0	36.14		1438	0	36.18	
4	1443	0			1428	0		
5	1442	0		g	1432	0		
6	1432	0			1427	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 36.3 mm
Pass - No BFS greater than 44 mm

Sample 6 — Size: C-5

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1430	0	35.94		1427	0	30.45	
1444	0	34.24		1429	0	35.17	
1424	0	31.41		1433	0	32.66	
1432	0		g	1439	0		
1434	0			1437	0		
1429	0			1441	0		

BFS Statistics: Count: 12
Average: 34.34 mm
St. Dev: 1.95635 mm

Sample 7 — Size: C-1

Shot Number	Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1410	0	39.95		1443	0	38.45	
2	1423	0	41.2		1415	0	33.48	
3	1414	0	39.97		1411	0	35.51	
4	1432	0			1426	0		
5	1401	0			1424	0		
6	1423	0			1410	0		
7								
8								

Summary: Perforations: 0 (Pass)
Maximum BFS: 41.2 mm

Sample 8 — Size: C-1

Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1415	0	38.53		1441	0	37.28	
1436	0	37.87		1456	0	36.42	
1448	0	40.4		1433	0	36.15	
1452	0			1458	0		
1433	0			1436	0		
1422	0			1440	0		

BFS Statistics: Count: 12
Average: 37.93 mm
St. Dev: 2.28034 mm

For Test Laboratory Use

NATIONAL INSTITUTE OF JUSTICE
COMPLIANCE TEST REPORT

NVLAP Lab Code: 200818-0

Test Laboratory Name: United States Test Laboratory
Report Identification Number: 12N012
Issue / Revision Number: Initial Issue

Penetration and BFS Summary Data

Report Date: 09/25/12
NIJ Armor Type: 2

Test ID: SUR09-001992
Manufacturer: Survival Armor, Inc.

Threat 1 - Conditioned Armor
Test Velocity: 1245 ± 30 ft/s
Conditioning: Conditioned
Ammunition: 9mm 124/FMJ

Shot Number	Sample 21 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note	Sample 22 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1256	0	34.38		1268	0	33.62		1242	0	33.79		1246	0	35.1	
2	1238	0	35.1		1237	0	37.2		1262	0	29.96		1256	0	36.66	
3	1252	0	34.68		1269	0	40.01		1253	0	37.38		1270	0	39.6	
4	1236	0		g	1250	0			1240	0		g	1269	0		
5	1245	0		g	1269	0			1284	0			1254	0		
6	1263	0			1272	0			1265	0			1265	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 40.01 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 39.6 mm (no requirement)							

Threat 2 - Conditioned Armor
Test Velocity: 1340 ± 30 ft/s
Conditioning: Conditioned
Ammunition: .357 Mag 158/JSP

Shot Number	Sample 23 Size: C-5 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note	Sample 24 Size: C-1 Front Panel Avg. Vel. (ft/sec)	Front Panel Perf (Y=1/N=0)	Front Panel BFS (mm)	Front Panel Note	Back Panel Avg. Vel. (ft/sec)	Back Panel Perf (Y=1/N=0)	Back Panel BFS (mm)	Back Panel Note
1	1310	0	37.71		1325	0	34.58		1323	0	37.96		1351	0	35.98	
2	1340	0	45.48		1353	0	43.11		1345	0	41.91		1356	0	40.98	
3	1352	0	33.55		1345	0	32.71		1312	0	43.09		1347	0	41.01	
4	1360	0		g	1323	0			1311	0			1325	0		
5	1334	0			1336	0			1344	0			1319	0		
6	1344	0			1341	0			1320	0			1311	0		
7																
8																
Summary:	Perforations: 0 (Pass) Maximum BFS: 45.48 mm (no requirement)								Perforations: 0 (Pass) Maximum BFS: 43.09 mm (no requirement)							

Overall P-BFS Summary

Perforations: This requirement is for all P-BFS tested samples - New and Conditioned
0 This armor model meets the perforation performance requirements of NIJ Standard-0101.06 Section 7.8.8.

Backface Signature: This requirement is for New armors only
Maximum BFS: 41.2 mm
This armor model meets the BFS performance requirements of NIJ Standard-0101.06 Section 7.8.8 Item a.

Compliance Test Report revision NIJ0101 2-19 (2012-08-06) / MS Excel version 11.0 / Operating System version Windows (32-bit) NT 5.01

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-889

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 3 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

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Chesapeake Testing is an independent testing facility and has no affiliation with United Shield International.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 3 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 2	Proprietary	10.00 x 12.00	0.87	1.04

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- .357-cal., 125-grain SIG gold dot hollow point (GDHP) projectiles.
- 9-mm +P+, 127-grain supreme expansion technology (SXT) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0. obliquity and ambient range temperature (66.7 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 2	0.0	.357-cal., 125-grain SIG GDHP	1	1399	None	17.2
				2	1395	None	16.3
			9-mm +P+, 127-grain SXT	3	1251	None	13.8
				4	1255	None	14.5

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International
Job No.: 2161-012-1
Test Date: 6/3/2013

Test Panel — **Description:** Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International — **Sample No.:** Panel 2

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 66.7 F
Obliquity: 0.0	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 55.8%
Condition: Ambient		Barrel/Gun: CT-3017
		Gunner: Matt Settle
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) .357-cal., 125-grain SIG GDHP	Speer 23918	Accurate No. 2
(2) 9-mm +P+, 127-grain SXT	Winchester RA9TA	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.0 mm, 18.5 mm, 19.5 mm, 19.5 mm, 19.4 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3574	1399	3098	1399	1399	None	17.2	
2	1	3585	1395	3107	1395	1395	None	16.3	
3	2	3995	1252	3465	1251	1251	None	13.8	
4	2	3983	1255	3452	1255	1255	None	14.5	

Remarks:
R3 box temp.: 99.0 F
Block 04 clay temp.: 98.9 F
The plate was impacted with a soft armor panel behind it.
Plate weight: 0.87 lbs, Soft Armor Weight: 1.98 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-815-R1

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 3 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with United Shield International.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 3 and 5 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 1	Proprietary	10.00 x 12.00	0.84	1.01

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- .44-mag., 240-grain semi-jacketed hollow point (SJHP) projectiles.
- .357-cal., 125-grain SIG full metal jacketed flat nose (FMJ FN) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (66.9 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 1	0.0	.44-mag., 240-grain SJHP	1	1444	None	32.7
				2	1443	None	30.1
			.357-cal., 125-grain SIG FMJ FN	3	1466	None	14.7
				4	1461	None	13.5

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International
Job No.: 2161-012-1
Test Date: 6/3/2013

Test Panel — **Description:** Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International — **Sample No.:** Panel 1

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 3
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 66.9 F
Obliquity: 0.0	Range to Target (ft): 17.200	BP: 29.7 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 56.5%
Condition: Ambient		Barrel/Gun: CT-3017
		Gunner: Matt Settle
		Recorder: John Murray

Ammunition

Projectile	Lot No.	Powder
(1) .44-mag., 240-grain SJHP	Speer	Accurate No. 5
(2) .357-cal., 125-grain SIG FMJ FN	Speer 4731	Accurate No. 2

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 18.2 mm, 18.3 mm, 18.9 mm, 19.0 mm, 19.7 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	3469	1441	2996	1446	1444	None	32.7	
2	1	3470	1441	2997	1446	1443	None	30.1	
3	2	3410	1466	2956	1466	1466	None	14.7	
4	2	3421	1462	2965	1461	1461	None	13.5	

Remarks:
R3 box temp.: 99.0 F
Block 04 clay temp.: 100.7 F
The plate was impacted with a soft armor panel behind it.
Plate weight: 0.84 lbs, Soft Armor Weight: 1.98 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

POC: Mr. Paul Banducci
POC Phone No.: 231-933-1179
Purchase Order No.: 1650
Report No.: CT-RD-13-891

United Shield International, Armor Protection Ballistic Resistance Test: Job No. 2161-012, Tested 5 June 2013

Prepared by:

Craig A. Thomas
Melissa C. Brown

Chesapeake Testing
4603B Compass Point Road

Belcamp, MD 21017

20 June 2013

Further dissemination only as directed by United Shield International, June 2013.

The information contained in this report may be subject to the provisions of the Export Administration Act (50 USC 2401 et seq.), the Export Administration Regulations (15 CFR 768-799), or the U.S. Arms Export Control Act (22USC 2778 et seq.) and the International Traffic in Arms Regulations (22 CFR 120-130). These statutes and regulations impose restrictions on import, export and transfer to foreign entities and persons, whether within the U.S. or abroad, of certain data and articles without approved licenses from the U.S. Department of State and/or the U.S. Department of Commerce.

Chesapeake Testing is an independent testing facility and has no affiliation with United Shield International.

UNITED SHIELD INTERNATIONAL PROPRIETARY INFORMATION

1 Introduction

United Shield International provided one armor sample to Chesapeake Testing for ballistic resistance testing on 5 June 2013. Prior to testing, the sample was dimensioned and weighed. The results are presented in Table 1.

Table 1. Physical Data for Armor Sample

Job No.	Sample No.	Armor Description	Length x Width (in)	Weight (lbs)	Areal Density (lb s/ft^2)
2161-012-1	Panel 4	Proprietary	10.00 x 12.00	0.88	1.06

2 Threats and Instrumentation

2.1 Threats

The threats used for this ballistic resistance test were:

- 5.70 x 28-mm 27-grain SS195 lead free hollow point (LFHP) projectiles.
- 5.70 x 28-mm 40-grain Hornady V-Max (Blue Tip) projectiles.

All projectiles were fired from a universal receiver which was fitted with the appropriate barrel and mounted on a Chesapeake Testing mount.

2.2 Instrumentation

Projectile velocity measurements were obtained using Oehler Research model No. 57 infrared screens and Hewlett-Packard (HP) counter chronographs (universal counters, HP model No. 53131A). A digital caliper was used to measure the post-impact deformations observed in the backing clay.

3 Details of Test

The objective of this test was to conduct a ballistic resistance test on the armor sample in accordance with NIJ-STD-0101.06 Level IIIA (modified) and the customer's request. Shot spacing between multiple impacts on the sample was in accordance with the customer's request. All shots against the armor sample were performed at 0.0 obliquity and ambient range temperature (65.6 °F).

For each shot, the sample was tested in conjunction with a soft armor panel that was strapped to a 5.5-in clay/plywood backing and clamped to a rigid test fixture. All firings were conducted at 17.200 ft from the target. The projectile velocities used for the test were in accordance with the referenced performance standard.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

The threat projectiles were required to have no greater than 3° total yaw. Projectile yaw was measured to ensure that the test impacts were within this constraint by placing a yaw card at the appropriate gun-to-target range during velocity verification shots.

4 Summary of Results

The results of the ballistic resistance test are shown in Table 2. The round-by-round ballistic data sheet for the ballistic resistance testing performed is provided on the following page.

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

Table 2. Summary of Ballistic Resistance Test Results

Job No.	Sample No.	Target Obliquity (deg)	Threat	Shot No.	Penetration Data		
					Velocity (ft/s)	Result	Deformation (mm)
2161-012-1	Panel 4	0.0	5.70 x 28-mm, 27-grain SS195 LFHP	1	2300	None	13.1
				2	2329	None	13.3
			5.70 x 28-mm, 40-grain Hornady V-Max (Blue Tip)	3	2017	None	7.5
				4	2014	None	9.1

BALLISTIC RESISTANCE TEST

Chesapeake Testing
4603B Compass Point Road
Belcamp, MD 21017

Client: United Shield International, LLC
Job No.: 2161-012-1
Test Date: 6/5/2013

Test Panel

Description: Proprietary; Plate model: SPARTAN plus soft armor model: 202-II, Lot No.: 0213/27

Manufacturer: United Shield International, LLC

Sample No.: Panel 4

Size: See remarks	Heat No.: NA	Date Received: 5/31/2013
Thickness: NA	Weight: See remarks	Via: FedEx
Avg. Thick: NA	Hardness: NA	Returned: FedEx
	Plies/Laminates: NA	

Setup

Shot Spacing: Customer request	Primary Vel. Screens (ft): 6.500, 6.833, 11.166, 11.500	Range No.: 1
Witness Panel: Clay	Primary Vel. Location (ft): 9.000	Temp: 65.6 °F
Obliquity: 0.0°	Range to Target (ft): 17.200	BP: 30 inHg
Backing Material: 5.5-in clay/plywood	Target to Witness (in): 0.000	RH: 48.7%
Condition: Ambient		Barrel/Gun: CT-3037
		Gunner: Jordan Mears
		Recorder: Keith Crouse

Ammunition

Projectile	Lot No.	Powder
(1) 5.70 x 28-mm, 27-grain SS195 LFHP	FNH USA FNB10A901 -012	Factory load
(2) 5.70 x 28-mm, 40-grain Hornady V-Max (Blue Tip)	FNH USA 0117169088	Factory load

Applicable Standards or Procedures

(1) Clay drops (NIJ) - 19.3 mm, 19.7 mm, 20.3 mm, 18.4 mm, 17.8 mm
(2) NIJ-STD-0101.06 Level IIIA (modified)
(3) Customer request

Shot No.	Ammo	Time 1 (µs)	Vel. 1 (ft/s)	Time 2 (µs)	Vel. 2 (ft/s)	Avg. Vel. (ft/s)	Penetration	Deformation (mm)	Footnotes
1	1	2172	2302	1886	2297	2300	None	13.1	
2	1	2145	2331	1862	2327	2329	None	13.3	
3	2	2477	2019	2149	2016	2017	None	7.5	
4	2	2482	2015	2153	2013	2014	None	9.1	

Remarks:
R1 box temp.: 99.0 °F
Block 05 clay temp.: 97.6 °F
Panel impacted with a soft armor panel behind it.
Plate weight: 0.88 lbs, Soft Armor Weight: 2.09 lbs
Plate size: 10.00 x 12.00 in, Vest size: Small

Footnotes:

UNITED SHIELD INTERNATIONAL
PROPRIETARY INFORMATION

.44 panel 4, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	436.0	Held	C	
3	441.8	Held	C	

.44 panel 5, 0.915kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	436.6	Held	C	
2	437.8	Held	C	
3	437.1	Held	C	

.44 panel 6, 0.558kg
.44 Magnum semi-jacketed hollow point Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	445.1	Held	C	
2	437.5	Held	C	
3	436.4	Held	C	

END OF REPORT

ANNEX A

RESULTS

9mm panel 1, 0.550kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	437.5	Held	C	
2	441.3	Held	C	
3	437.1	Held	C	

9mm panel 2, 0.791kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	439.0	Held	C	
2	447.9	Held	C	Fast
3	423.7	Held	C	Slow

9mm panel 3, 0.789kg
9mm 124gr FMJ Remington
Required velocity 426m/s to 446m/s

Shot No.	Velocity (m/s)	Sample Held or Penetrated	Trauma code	Comments / Assessment
1	437.4	Held	C	
2	428.7	Held	C	
3	438.2	Held	C	

SURVIVAL ARMOR®

Survival Armor® Achieves ISO 9001:2008/BA 9000:2012

Press Release

Ft. Myers, Florida, November 14, 2014- Survival Armor President Larry McCraney is pleased to announce that Survival Armor is promoting their dedication to be unparalleled in quality manufacturing by achieving the ISO 9001:2008 / BA 9000:2012 certification. The BA 9000:2012 certification was developed to coincide and reinforce standards required by the National Institute of Justice.

Survival Armor is one of the only ISO 9001:2008/BA 9000:2012 body armor manufacturers in the world to obtain this prestigious certification that strictly focuses on quality assurances when manufacturing body armor. Since the release of the BA 9000:2012 standard Survival Armor has focused on maintaining and improving their efforts to go above and beyond the requirements needed to achieve the BA 9000:2012 certification.

This certification is just another testament to Survival Armor's dedication to protect those who protect us. Their ability and drive to provide their customers with the most innovative and highest quality products possible is their priority. They continue to strive toward excellence by producing the best body armor in the world.

It's All About Survival...

About Survival Armor

Survival Armor® is located in Fort Myers, Florida. Survival Armor has brought together some of the best minds from the US ballistic protection industry combining well over 80 years of experience. Manufacturer of innovating patented concealable and tactical body armor in male and structured female, as well as, transportation protection for law enforcement, military and federal governments. Survival Armor, Inc.'s organization's quality management system is compliant with ISO 9001:2008 / BA 9000:2012.

PERRY JOHNSON REGISTRARS, INC.

ANAB ACCREDITED

12621 Corporate Lakes Drive, Unit 8 – Fort Myers, FL 33913

Phone: 866.868.5001 Fax: 239.210.0898 Web: www.survivalarmor.com

SURVIVAL ARMOR INTEGRATED MEDICAL KIT

The kit contents of the Survival Armor Integrated Medical Kit are designed to give EVERY responding officer the means to effectively deal with the two main causes of preventable combat deaths (penetrating trauma):

- Extremity Hemorrhage
- Tension Pneumothorax

Kit dimensions: 7 3/4 wide x 3 1/4 tall x 1/2" thick
Kit weight including deployment pouch: 7.5 oz

CONTENTS:

Kit 1
(1) SWAT T Tourniquet
(1) wound packing Gauze
(1) duct tape
(2) occlusive dressings
(1) pair nitrile gloves

Kit 2
(1) SWAT T Tourniquet
(1) Quikclot® combat Gauze
(1) duct tape
(2) occlusive dressings
(1) pair nitrile gloves

Kit deploys from integrated deployment pouch out of Vertex6 concealable carrier
- *OR* - from retrofit vertex 6 pouch



SURVIVAL ARMOR®

Technical Specification

Paragon[6]

Level IIIA – FEM – NIJ 0101.06 Requirement

Model Number	LW-FEM-IIIA
Ballistic Material	Aramid/Polyethylene
Pad Cover	TPU Coated *Ripstop*
NIJ Level	IIIA
Weight (Areal Density)	1.05 lbs/ft^2
Thinness	.24 inches
V50 357sig	1893 fps
V50 44mag	1762 fps
Certification Backface- 357sig	27.03 mm
Certification Backface- 44mag	35.22 mm

SURVIVAL ARMOR®

Technical Specification

Paragon[6]

Level II – NIJ 0101.06 Requirement

Model Number	LW-II
Ballistic Material	Aramid/Dyneema
Pad Cover	TPU Coated *Ripstop*
NIJ Level	II
Weight (Areal Density)	.77 lbs/ft^2
Thinness	.17 inches

V50 9mm	1629 fps
V50 357mag	1556 fps

Certification Backface- 9 mm	32.48 mm
Certification Backface- 357 mag	32.53 mm

SURVIVAL ARMOR®

Technical Specification

Paragon[6]

Level IIIA – NIJ 0101.06 Requirement

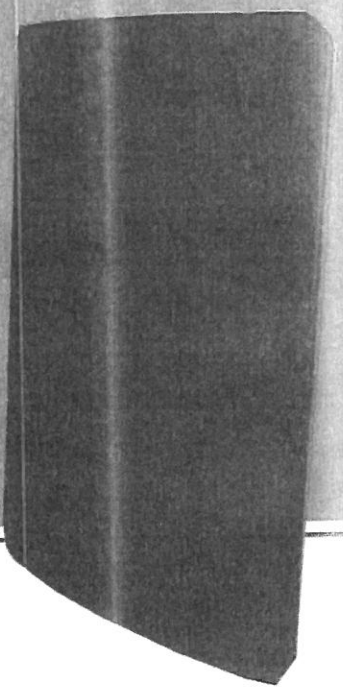
Model Number	LW-IIIA
Ballistic Material	Aramid/Polyethylene
Pad Cover	TPU Coated *Ripstop*
NIJ Level	IIIA
Weight (Areal Density)	1.05 lbs/ft^2
Thinness	.20 inches
V50 357sig	1927 fps
V50 44mag	1735 fps
Certification Backface- 357sig	29.4 mm
Certification Backface- 44mag	38.8 mm

0° dry		Required V50 (fps)	Actual V50 (fps)	% of Required
2 grain RCC		2710	3096	114%
4 grain RCC		2400	2675	111%
16 grain RCC		2050	2254	110%
64 grain RCC		1660	1859	112%
17 grain FSP		1850	2174	118%

United Shield International

SPARTAN PANEL
NIJ Level IIIA Panel

The Spartan panel is a high performance, lightweight and ultra thin panel designed to provide discrete protection against hand guns, knives and explosion. Spartan is rated to NIJ Level IIIA 0108.01 (Ballistic resistant protective materials) which includes 44 magnum and 9mm and all lesser threats. Spartan is constructed from United Shield's advanced proprietary technology and is available curved or flat.





Weight &Thickness

10 x 12 inch plate weighs .96lb (440 grams)
and is 3/16 inch thick (<5mm)

Sizes

10 x 12 inches (25 x 30cm),
9 x 7 inches (23 x 18cm),
8 x 5 inches (20 x 12cm)
Other sizes and bespoke shapes available on request

Applications

Spartan can be used in a variety of different applications including backpacks, clipboards, briefcases, handbags ,trauma armor, Structural armor, upgrade plates etc.

Colors

The standard plate has a black nylon wrap. Other colors and finishes are available on request.

Warranty & Quality Assurance

United Shield International Ltd offers a five year warranty on ballistic performance and is an ISO9001:2008 registered company.

Special threat-tested against the following rounds:

FN 5.7 X 28mm 27-grain SS195 LFHP
.44 MAG, 240-grain SJHP
.357 SIG 125-grain GDHP
FN 5.7 X 28mm 40-grain Hornady V-Max (Blue Tip)
.357 SIG 125 grain FMJFN
9-mm +P+, 127-grain SXT

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www.unitedshield.com

RFQ No. DPS1500000008

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Modern Firearms of Chattanooga, LLC

Authorized Signature: _____ Date: 01/05/2015

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 6 day of January, 2015.

My Commission expires April 4, 2024.

AFFIX SEAL HERE

NOTARY PUBLIC OFFICIAL SEAL
CARRIE E. SHEPHERD
State of West Virginia
My Commission Expires Apr. 4, 2024
4515 MacCorkle Ave., Charleston, WV 25301

NOTARY PUBLIC _____