


030-38349

<b>NRC FORM 313</b> (05-2012) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40	<b>U.S. NUCLEAR REGULATORY COMMISSION</b>	<b>APPROVED BY OMB: NO. 3150-0120</b> Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.	<b>EXPIRES: (05/31/2015)</b>				
<b>APPLICATION FOR MATERIALS LICENSE</b>							
<b>INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.</b>							
<b>APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:</b>  OFFICE OF FEDERAL & STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS DIVISION OF MATERIALS SAFETY AND STATE AGREEMENTS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001  <b>ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:</b>  <b>IF YOU ARE LOCATED IN:</b>  ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,  <b>SEND APPLICATIONS TO:</b>  LICENSING ASSISTANCE TEAM DIVISION OF NUCLEAR MATERIALS SAFETY U.S. NUCLEAR REGULATORY COMMISSION, REGION I 2100 RENAISSANCE BOULEVARD, SUITE 100 KING OF PRUSSIA, PA 19406-2713		<b>IF YOU ARE LOCATED IN:</b>  ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, <b>SEND APPLICATIONS TO:</b>  MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, IL 60532-4352  ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,  <b>SEND APPLICATIONS TO:</b>  NUCLEAR MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 1600 E. LAMAR BOULEVARD ARLINGTON, TX 76011-4511					
<b>PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.</b>							
1. THIS IS AN APPLICATION FOR <i>(Check appropriate item)</i>  <input type="checkbox"/> A. NEW LICENSE <input checked="" type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER <u>04-23994-01E</u> <input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____		2. NAME AND MAILING ADDRESS OF APPLICANT <i>(Include ZIP code)</i>  SAIC 10740 Thornmint Rd. San Diego, CA 92127					
3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED  10740 Thornmint Road San Diego, CA 92592		4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION Jeff Johanning <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">BUSINESS TELEPHONE NUMBER (858) 826-9725</td> <td style="width: 50%;">BUSINESS CELLULAR TELEPHONE NUMBER (951) 375-6655</td> </tr> <tr> <td colspan="2">BUSINESS EMAIL ADDRESS johanningj@saic.com</td> </tr> </table>		BUSINESS TELEPHONE NUMBER (858) 826-9725	BUSINESS CELLULAR TELEPHONE NUMBER (951) 375-6655	BUSINESS EMAIL ADDRESS johanningj@saic.com	
BUSINESS TELEPHONE NUMBER (858) 826-9725	BUSINESS CELLULAR TELEPHONE NUMBER (951) 375-6655						
BUSINESS EMAIL ADDRESS johanningj@saic.com							
SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.							
5. RADIOACTIVE MATERIAL a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.		6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.					
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.		8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.					
9. FACILITIES AND EQUIPMENT.		10. RADIATION SAFETY PROGRAM.					
11. WASTE MANAGEMENT.		12. LICENSE FEES <i>(See 10 CFR 170 and Section 170.31)</i>  <table style="width: 100%;"> <tr> <td style="width: 70%;">FEE CATEGORY</td> <td style="width: 30%;">AMOUNT</td> </tr> <tr> <td></td> <td style="text-align: right;">ENCLOSED \$</td> </tr> </table>		FEE CATEGORY	AMOUNT		ENCLOSED \$
FEE CATEGORY	AMOUNT						
	ENCLOSED \$						
13. CERTIFICATION. <i>(Must be completed by applicant)</i> THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.  THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF. WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.							
CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE  Jeffrey R. Johanning, Health Physicist V / RSO		SIGNATURE 	DATE 12/19/12				
<b>FOR NRC USE ONLY</b>							
TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS		
			\$				
APPROVED BY				DATE			

579640





Dec. 19, 2012

Office of Federal & State Materials and  
Environmental Management Programs  
Division of Materials Safety and State Agreements  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

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RE: Amendment to License # 04-23994-01E to add exempt Ba-133 source installed in Xpose product line.

SAIC is requesting an amendment to our Exempt Distribution License # 04-23994-01E to include an Xpose product line of devices. The Xpose device will contain a 10  $\mu$ Ci exempt quantity of Ba-133. The source capsule is manufactured and distributed to SAIC as an exempt source by our licensed vendor, Spectrum Techniques, L.L.C. located in Oak Ridge, TN. A drawing of the source capsule is shown in Attachment 1. The Xpose device will be distributed to persons exempt from licensing pursuant to 10 CFR 30.15(a)(9). The specifics of meeting the requirements of 10CFR §32.14 & §32.15 are outlined below. All commitments made by SAIC in previous correspondences in regards to distribution activities under license # 04-23994-01 will be followed by SAIC.

1) *10CFR§32.14(b)(1) Chemical and physical form and maximum quantity of byproduct material in each product;*

Each source has a maximum of 10  $\mu$ Ci of Ba-133. The source is evaporated into a small aluminum rod and the top is sealed with epoxy to prevent any leakage of the byproduct material. The source is a sealed source and distributed to SAIC already as an exempt source from Spectrum Techniques. A drawing of the source is Attachment 1.

2) *10CFR§32.14(b)(2) Details of construction and design of each product;*

The product design is shown in attachment 2-5. The product is an integrated source – shield/shutter device which includes a Source Disc, Source Heart, and Tungsten Wedge. The 3 parts of the shield/shutter mechanism are manufactured from tungsten for maximum shielding from the radiation and construction integrity. Additional lead shielding may be added as needed depending on specific Xpose product specifications and customer needs. The shield/shutter combination will be actuated by depressing 1 or 2 small button(s) for actuating arms as part of a rotational mechanism. This will rotate the source disc from the shielded position into the “on” position. The actuating arm mechanism is spring loaded to ensure safe return to the “closed (shielded)” position upon release of the button(s) and for Xpose storage.

3) *10CFR§32.14(b)(3) The method of containment or binding of the byproduct material in the product;*

The source will be delivered to SAIC as an exempt source from our licensed vendor. It is pressed into the tungsten source disc and to further ensure containment in the source disc, a drop of permanent epoxy will be applied to the source rod to permanently bind it into the source disc. The source - shield/shutter combination is completely enclosed so that the source disc cannot be inadvertently removed or fallout of the device.

10740 Thornmint Road  
San Diego, CA 92127





- 4) *10CFR§32.14(b)(4) Procedures for and results of prototype testing to demonstrate that the material will not become detached from the product and that the byproduct material will not be released to the environment under the most severe conditions likely to be encountered in normal use of the product;*

The most severe condition likely to be encountered is for the user to drop the device onto a hard surface. The prototype testing to demonstrate source containment or that the material will not be released into the environment was a drop test of the device from 5 ft. onto a hard surface. Procedure and results are given in Attachment 6.

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Based on the results of the prototype testing, SAIC believes that the material is properly contained in the source rod and that the source rod will not become detached from the source disc under the most severe conditions that are likely to be encountered in normal use and handling.

- 5) *10CFR§32.14(b)(5) Quality control procedures to be followed in the fabrication of production lots of the product and the quality control standards the product will be required to meet;*

Each source-shield/shutter will be manufactured to precise dimensions. Each device will be visually inspected and tested for leakage of material. Also, SAIC Thornmint is ISO 9001.2008 certified for manufacturing detection devices. A copy of the certification is shown in Attachment 7. Also, a copy of our program manual was submitted as part of SAIC's license application. All applicable ISO 9009.2008 process according to our manual will be followed for the fabrication of the device.

- 6) *10CFR§32.14(b)(6) The proposed method of labeling or marking each unit, except timepieces or hands or dials containing tritium or promethium-147, and its container with the identification of the manufacturer or initial transferor of the product and the byproduct material in the product;*

The source disc is typically labeled RADIOACTIVE, identifying SAIC as the manufacturer, the activity of the source as 10  $\mu$ Ci, and the isotope as Ba-133 as shown in Attachment 2. When the entire Xpose module is assembled the source disc and label are covered and an appropriate label is placed on the outside of the assembly to indicate Xpose contains a radioactive source. A copy of a typical label on the outermost assembly is shown in Attachment 8.

- 7) *10CFR§32.14(b)(7) For products for which limits on levels of radiation are specified in § 30.15 of this chapter, the radiation level and the method of measurement;*

Radiation levels are not limited for this product under this section. However, a radiation survey has been completed and the maximum radiation level measured at 2 inches is 0.030 mr/hr with the shutter closed.

- 8) *10CFR§32.14(c) Each product will contain no more than the quantity of byproduct material specified for that product in § 30.15 of this chapter. The levels of radiation from each product containing byproduct material will not exceed the limits specified for that product in § 30.15 of this chapter.*

Each Xpose device will contain no more than one 10  $\mu$ Ci source of Ba-133 byproduct material.



- 9) *10CFR§32.14(d) The Commission determines that the byproduct material is properly contained in the product under the most severe conditions that are likely to be encountered in normal use and handling.*

See results of SAIC's prototype testing in Attachment 6.

- 10) *10CFR§32.15(a)(1) Maintain quality assurance practices in the manufacture of the part or product, or the installation of the part into the product.*

SAIC will maintain the quality assurance practices as applicable in our ISO 9001.2008 certification and standard health physics practices to ensure safety to the public and SAIC employees during the manufacturing and installation of the Xpose device.

- 11) *10CFR§32.15(a)(3) Visually inspect each unit, except electron tubes containing byproduct material, in inspection lots. Any unit which has an observable physical defect that could affect containment of the byproduct material shall be considered as a defective unit.*

Each device will be visually inspected and tested for leakage of material. Any component that could affect the containment of the byproduct material shall be considered defective and will either be repaired or replaced prior to distribution of Xpose.

- 12) *10CFR§32.15(c) No person licensed under § 32.14 shall transfer to other persons for use under § 30.15 of this chapter or equivalent regulations of an Agreement State any part or product which has been tested and found defective*

SAIC will not distribute any of the devices that are determined to be defective.

- 13) *10CFR§32.18(d) The applicant submits copies of prototype labels and brochures and the Commission approves such labels and brochures*

A sample of the labeling for Xpose is shown in the attachments and a preliminary brochure sheet is included as Attachment 9.

If you have any questions regarding this amendment request, please feel free to contact me.

A handwritten signature in black ink that reads "Jeffrey R. Johanning".

Jeffrey R. Johanning  
Health Physicist V / RSO  
SAIC  
858-826-9725  
[johanningj@saic.com](mailto:johanningj@saic.com)





**ATTACHMENT 1:      BA-133 SOURCE CAPSULE (ITTY BITTY)**

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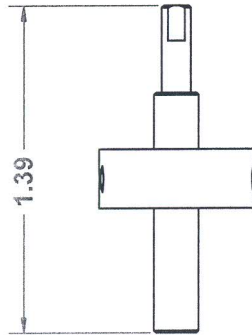
**ATTACHMENT 2-5: SOURCE DISC; SOURCE HEART; TUNGSTEN WEDGE;  
AND SHIELD SHUTTER ASSEMBLY**

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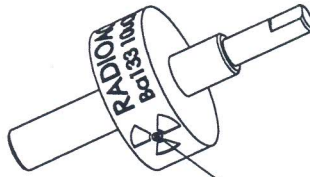
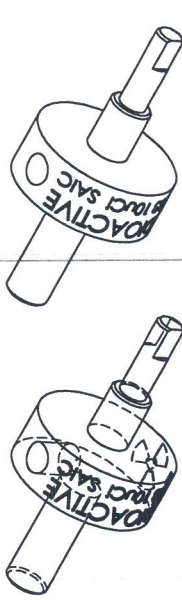
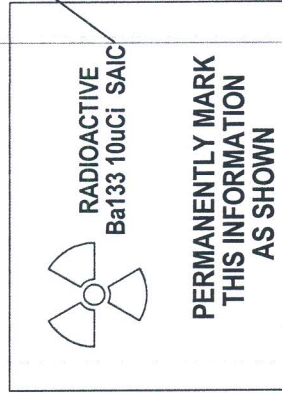
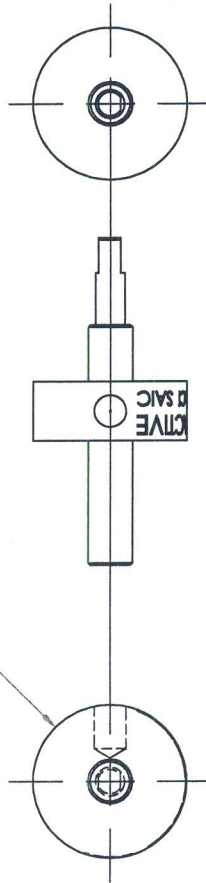


NOTES:

1. MATERIAL: Tungsten
2. FINISH: N/A



$\phi .65$



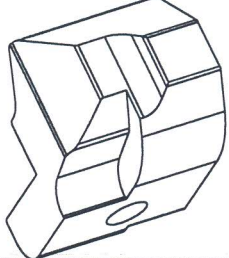
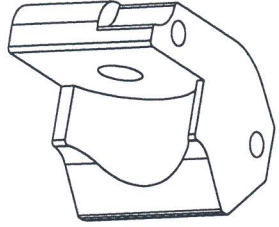
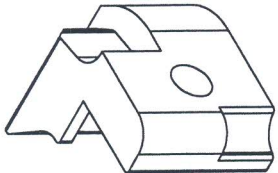
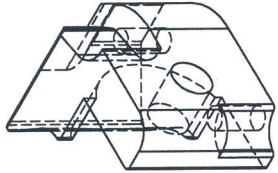
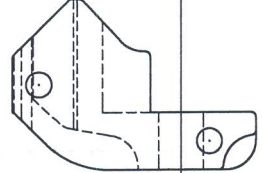
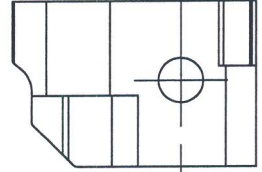
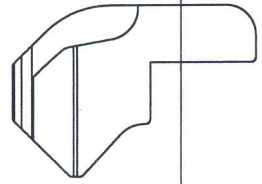
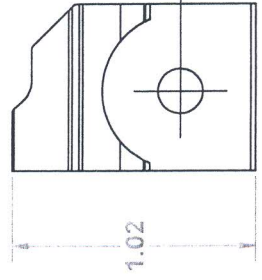
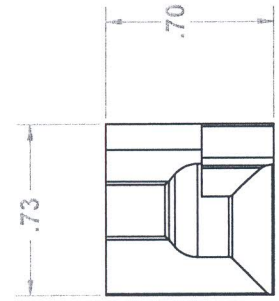
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ANGULAR ±		BEND ±		TWO PLACE DECIMAL ±		THREE PLACE DECIMAL ±	
Q.A.		COMMENTS:		NITROPRE GEOMETRIC		TOLERANCING PER:	
MATERIAL		FINISH		USED ON		APPLICATION	
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8 7 6 5 4 3 2 1

NOTES:

- 1. MATERIAL: Tungsten
- 2. FINISH: N/A



SAIC

Source Heart  
1X4.5X5

SIZE DWG. NO. **B** 701hrt  
REV **X1**  
SHEET 1 OF 1

NAME  
D. NICHOLS

DATE  
12/10/02

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES  
TOLERANCES  
FRACTIONAL ±  
ANGULAR ±  
TWO PLACE DECIMAL ±  
THREE PLACE DECIMAL ±  
BEND ±  
ENG APPR.  
MFG APPR.  
Q.A.  
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SAIC COMPANY NAME HERE-5  
PROHIBITED.

NOT ASSY  
APPLICATION

USED ON

DO NOT SCALE DRAWING

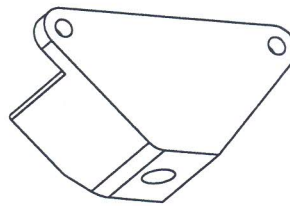
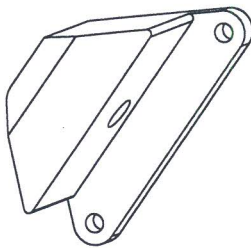
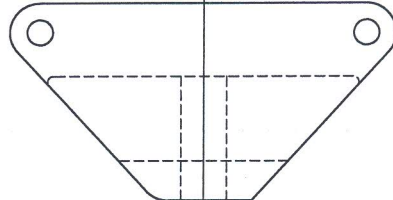
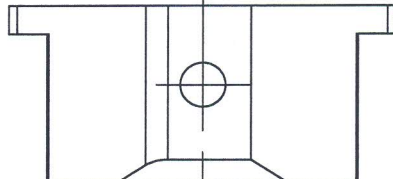
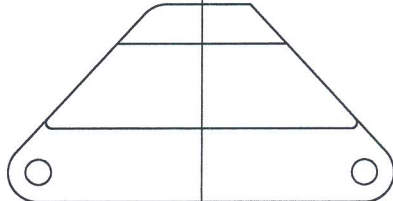
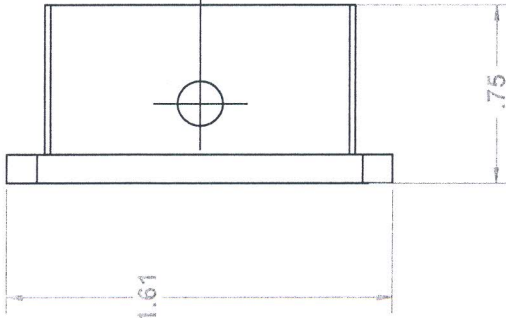
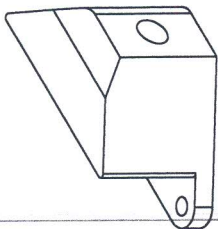
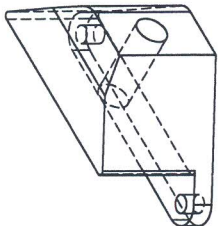
Source Heart 1X4.5X5



8 7 6 5 4 3 2 1

NOTES:

- 1. MATERIAL: Tungsten
- 2. FINISH: N/A



SAIC

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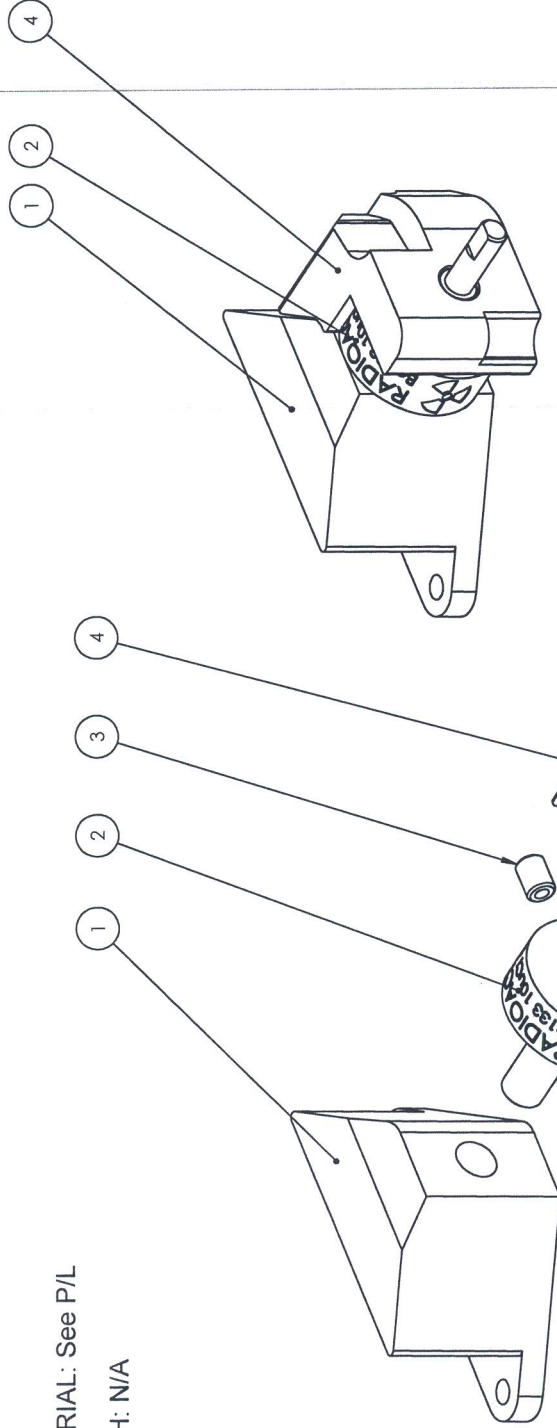
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Tungsten Wedge 1X4.5X5

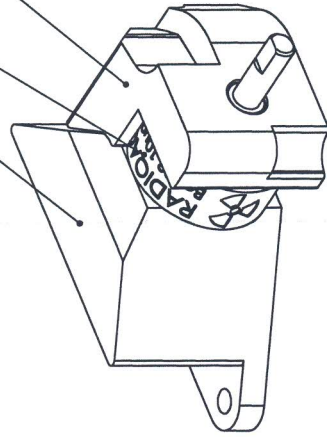
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APPLICATION		USED ON		PROPRIETARY AND CONFIDENTIAL		THE INFORMATION CONTAINED IN THIS		DRAWING IS THE SOLE PROPERTY OF		REPRODUCTION IN PART OR AS A WHOLE	
WITHOUT THE WRITTEN PERMISSION OF		SAIC COMPANY NAME HERE'S		PROHIBITED.		8		7		6	

NOTES:

1. MATERIAL: See P/L
2. FINISH: N/A



EXPLODED VIEW



ASSEMBLED VIEW

ITEM No.	QTY	PART No.	DESCRIPTION
4	1		SOURCE HEART
3	1		SPECTRUM TECHNOLOGIES SOURCE ROD Ba133
2	1		SOURCE DISC
1	1		TUNGSTEN WEDGE

UNLESS OTHERWISE SPECIFIED:		DATE	12/10/12
DIMENSIONS ARE IN INCHES		NAME	D. NICHOLS
TOLERANCES:		DRAWN	
FRACTIONAL ±		CHECKED	
ANGULAR ±		ENG APPR.	
HOLE POSITION ±		MFG APPR.	
THREE PLACE DECIMAL ±		G.A.	
INTERPRET GEOMETRIC		COMMENTS:	
TOLERANCING PER:			
MATERIAL:			
FINISH:			
NEXT ASSY:		USED ON:	
APPLICATION:		DO NOT SCALE DRAWING	

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SAIC

Xpose Source  
Assembly

SIZE DWG. NO. REV  
B 701xsa X1

SCALE: 2:1 SHEET 1 OF 1





**ATTACHMENT 6: PROCEDURES FOR AND RESULTS OF PROTOTYPE TESTING**

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## Xpose Drop Test

---

Date: 12/12/12

Prepared by: Jeff Johanning  
Health Physicist V / RSO

Science Applications International Corporation  
10740 Thornmint Rd.  
San Diego, California 92127  
858-826-9725  
Johanningj@saic.com



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## Test Procedure: Xpose Drop Test

### 1 Test Description

The Xpose Contraband Detection System uses a 10 uCi Ba-133 source to inspect hidden walls or compartments for contraband. The source is installed into a tungsten shield/shutter and kept in the closed position until turned on. The purpose of this test is to drop the Xpose device onto a hard surface to ensure the byproduct material will not be released into the environment. In order to match the most likely severe condition for this test, the Xpose device is to have installed:

- the source shield/shutter mechanism
- a digital and display board (not necessarily operable)
- a dummy detector crystal
- batteries

This will ensure that the mass (weight) of the Xpose is matched to a real operating unit. When fully implemented with all components, the mass of Xpose is 714 gm.

**NOTE:** The Xpose device under test is not an operable unit. The test is designed to demonstrate that the Ba-133 material will not become detached from the source disc and that the byproduct material will not be released to the environment under the most severe conditions likely to be encountered in normal use of the product. It is not required that the Xpose device functionality survive the drop test.

### 2 Objectives

#### Primary

- Demonstrate that the material will not become detached from the source disc and that the byproduct material will not be released to the environment under the most severe conditions likely to be encountered in normal use of the product (dropping Xpose onto a hard surface).

#### Secondary

- Determine weak points (if any) of stress of any non-source related components.

### 3 Equipment:

- Xpose test prototype with source shield/shutter and all other listed components installed
- Measuring tape
- Video camera

### 4 Procedure

- a) Measure mass (weight) of Xpose
- b) Wipe test the source for removable contamination before the drop test.
- c) Drop Xpose from gradually increasing heights onto a rubberized surface

12"  
18"  
24"  
36"

714 gm J<sup>2</sup>

## Test Procedure: Xpose Drop Test

- d) Drop Xpose from gradually increasing heights (up to 5 ft) onto a hard surface

12"  
24"  
36"  
48"  
60"

- e) Visually inspect the source disc to ensure the source capsule did not dislodge from the disc. Pass J<sup>2</sup>

- f) Wipe test the source to ensure there is no release of the byproduct material from the source capsule after drop test. (attach wipe results) Pass J<sup>2</sup>







## QUALITY CONTROL RECORD

HandCount S/N: 375		Cal Due Date: 06/12/13
Sources Used		
Isotope	Serial Number	4 $\pi$ Eff.
Pu-239	94-239-35	0.346
Tc-99	43-99-214	0.140

$$LLD = 3 + 3.29 \sqrt{(CPM_{BKGD} * TIME_{SAMPLE} (1 + \frac{TIME_{SAMPLE}}{TIME_{BKGD}}))}$$

If  $TIME_{SAMPLE} = 1$  min and  $TIME_{BKGD} = 10$  min:

$$LLD = 3 + 3.29 \sqrt{CPM_{BKGD} * 1.1}$$

$$MDA(\mu Ci) = \frac{LLD}{Efficiency * 2.22E6}$$

Date	Bkgd (cpm)		Source (cpm)	LLD counts	MDA $\mu$ Ci	Comments		Pass 3 $\sigma$	
								Yes	No
12/10/12	0.70	$\alpha$	18868	5.9	2.66E-6				
	39.8	$\beta\gamma$	452/3	21.8	7.97E-5				
12/14/12	0.2	$\alpha$	18838	4.5	5.91E-6				
	32.7	$\beta\gamma$	4454	22.7	7.3E-5				
		$\alpha$							
		$\beta\gamma$							
		$\alpha$							
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		$\alpha$							
		$\beta\gamma$							
		$\alpha$							
		$\beta\gamma$							



**ATTACHMENT 7:     ISO 9001.2008 CERTIFICATE**

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10740 Thornmint Road  
San Diego, CA 92127

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# PERRY JOHNSON REGISTRARS, INC.

## *Certificate of Registration*

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

**SAIC Advanced Engineering & Applied Science Division**  
**10740 Thornmint Road, San Diego, CA 92127 United States**

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

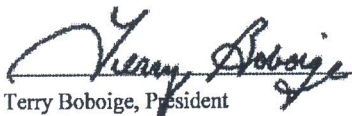
**ISO 9001:2008**

*This Registration is in respect to the following scope of supply:*

**Design, Manufacture and Deployment of Radiation Detection and  
Advanced Radiation Imaging Systems in support of  
Critical National Security Needs**

*Such products shall be manufactured by the Organization at, or such processes or services shall be offered at or from, only the address given above. 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.*

For PJR:

  
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:*  
May 8, 2010

*Revision Date:*  
July 20, 2011

*Expiration Date:*  
May 7, 2013

*Certificate No.:*  
C2010-01321-R1





**ATTACHMENT 8: TYPICAL LABLE FOR XPOSE**

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 CAUTION

RADIOACTIVE MATERIAL

SAIC  S/N   $\mu$ Ci

10740 Thornmint Rd  Date

San Diego, CA 92127



**ATTACHMENT 9: XPOSE BROCHURE**

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## Xpose Handheld Contraband Detection

NATIONAL SECURITY

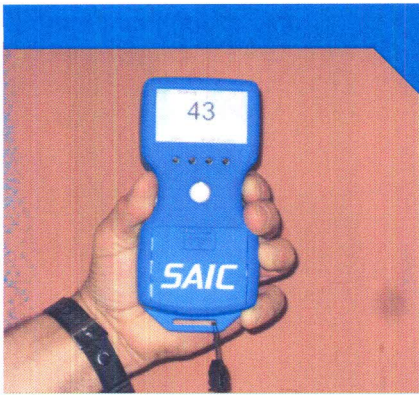
**The Xpose contraband detector is a compact, lightweight, rugged handheld density meter designed to aid law enforcement officials with the detection of hidden objects.**

Frequently contraband is covertly hidden in inaccessible areas, such as walls, tires, bulkheads, etc. where direct observation is not possible. Xpose gives an indication of contraband concealed in these locations. It works by measuring changes in density across the target area. Unexpected changes indicate the presence of hidden objects or compartments.

The ruggedized Xpose unit has been designed with an ergonomic grip, anti-scratch detection surface, integrated safety wrist strap and a large easy-to-read illuminated graphical display. It's lightweight (more than 30 percent lighter than other contraband detectors) and designed for ambidextrous operation.

**SAIC®**





- Dual detectors for faster response and increased penetration
- Ergonomic one-hand, one-touch operation
- High quality graphical display
- Ruggedized for use in industrial and outdoor environments
- Lightweight, compact design
- Built-in test and self-calibration

Specification	
Dimensions	5.8"x2.9"x1.7"
Weight	1.6 lbs (714g)
Display	400 x240 video graphic display
Battery	(3) AA alkaline batteries
Battery life	40 hours continuous "ON" duty, up to 6 months of stand-by
Operational modes	A) Survey: Xpose observes environment giving indication of radiation sources that maybe present B) Inspect: Xpose probes surface and provides user with indication of anomalous changes in density indicating contraband C) Calibration D) Built-in-test
Source	Barium 133, exempt quantity (not exceeding 10 microcuries, 370 kBq)
Detector	Dual CsI(Tl)
Depth of reading	7 inches

Visit us online: [saic.com](http://saic.com)

**FOR MORE INFORMATION**

Doug Ramsayer  
 858-826-6580  
[ramsayerd@saic.com](mailto:ramsayerd@saic.com)

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## Instructions Relating to the Handling, Use, Storage, and Disposal of Radioactive Material

The radioactive material contained in this device is exempt from U.S. NRC and/or U.S. Agreement State licensing requirements. Radioactive Material - Not for Human Use - Introduction into foods, beverages, cosmetics, drugs, or medicinals or introduction into products manufactured for commercial distribution (without appropriate U.S. NRC and/or Agreement State license) is prohibited. Exempt quantities should not be combined. The following precautions should be observed when using this material.

### 1. Handling

Although the quantities of radioactive material contained in these products is extremely small, the basic radiation principles of time, distance, and shielding should be practiced as effective methods for minimizing exposure.

Use of radioactive material should be only by responsible persons in authorized areas.

Eating, drinking, smoking, and the application of cosmetics should be prohibited in areas of use.

Gloves and laboratory coats should be worn when working with liquid radioactive material.

### 2. Use

Exempt quantity licensed products containing radioactive material should be used only as intended by the manufacturer and in accordance with the instructions provided with the products.

### 3. Storage

All radioactive materials should be securely stored when not in use.

### 4. Disposal

These exempt distribution products may be disposed of in regular waste without regard to their radioactive content providing the **customer is not a specific licensee** and all radiation symbols have been removed or defaced.

**If the customer (laboratory/academic institution) receiving the exempt quantity is a specific licensee, then the customer is subject to the requirements of 10 CFR Part 20 in areas where 10 CFR 30.15 and 30.18 is silent (e.g., waste disposal).**



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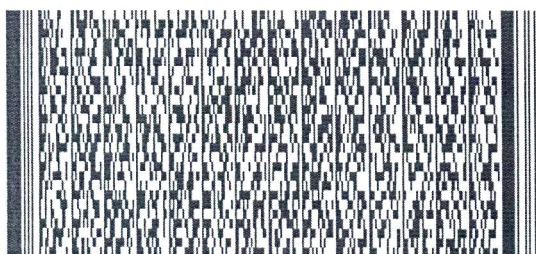


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