The information in this report is required by 14 CRF 108.17 & 129.26. Failure to report may result in a civil penalty not to exceed $1000.00 for each such violation. (Federal Aviation Act of 1958, Section 901)

Department of Transportation **Federal Aviation Administration**	***X-RAY SYSTEM RADIATION LEAKAGE REPORT (BAGGAGE INSPECTION)*** *(Require by 14 CRF 108.17, 14 CRF 129.26)*	FIELD TEST SERIAL NO. 11-7 T	Form Approved OMB No. 2120-0098

AA	1.1 Name and	Name of Facility *(18.80)* Logan International Airport	FDA Region MA	BB St. No. R.R. or Airline/Airport *(10.80)* BOS	
CC	Address of Facility	City *(10.73)* Boston		State Code MA	Zip Code 02128
DD	and Specific Location	Room No. or Other Location of System *(10.32)* US Air Main CP	Person Interview *(33.54)* [redacted]	Telephone No. [redacted]	
	of X-ray System	Certification Label Present Yes	Instruments: *(type and serial number)* Inovision	Model: 451P-RYR	Serial No. 468
01	1.2 Manufacture And Product ID	A. Manufacture *(Responsible Firm)* Rapiscan	B. OHU46	C. System Model No. and/or Name TRX 522B	
		D. 115vac 60Hz Unique I.D.	E. System Serial No. 7003203		
		F. Date of Manufacture Mo. Aug. Yr. 2000	1.4 Operator Instructions Available Yes	1.5 Maintenance Schedule Available N/A	
	2.0 Warning Labels	2.1 Warning Label Present at Controls Stating: "Caution: X-Rays Produced When Energized" Yes	2.2 Warning Labels Present at Ports Stating: "Caution: Do Not Insert Any Part of the Body When System is Energized, X-Ray Hazard" Yes	2.3 Two Indicators Labeled "X-Ray On" Present at Controls *(One May Be Labeled "mA Meter")* Yes	
02	Indicators	2.4 At Least One Indicator, X-Ray Marked "X-Ray On", Visible from Each Port, Door, And Access Panel Yes	3.0 Interlocks	3.1 "Captured Key" Control Yes	
	3.2 Door Safety Inter-Locks	A. Minimum Number of Interlocks Visible At Any One Door N/A	3.3 Prevention of X-Radiation By Interlocks	A. All Doors and Access Panels That Were Tested Prevent Generation of X-Radiation N/A	
		B. At Least One Interlock Dependent on No Moving Part Except Door N/A		B. Use of X-Ray Control Necessary to Resume Operation Following Interruption N/A	
	4.0 Ports and/or Apertures	4.1 Some Part of the Body Can Be Inserted Through a Port Into The Primary Beam NO		4.2 Some Part of the Body Can Be Inserted Into the Aperture NO	
	6.0 Baggage Inspection Systems	6.1 Means Provided to Ensure Operator Presence at the Control Area Yes		6.2 Means Provided to Operator for Terminating Exposures of Greater than One-Half Second and Preventing Yes	
03	7.0 Leakage Radiation	Specific Test Procedure Used 04	7.1 Scatter Block Description Pelican 1400 Case for the Inovision 451P meter		
05	7.2 Technical Factures	141 kVp	.716 mA		

7.3 Location Exposure Levels	Non-Continuously Activated Systems Only Number of Exposures Initiated	06 Location Exposure Levels	Non-Continuously Activated Systems Only Number of Exposures Initiated
.150 mR/hr	Exp	.081 mR/hr	exp
.149 mR/hr	Exp	.065 mR/hr	exp
.127 mR/hr	exp	.055 mR/hr	exp
.110 mR/hr	exp	.053 mR/hr	exp

07	Reasonable Number of Exposures That May Be Initiated in One Hour	OR	Duty Cycle of System Indicated As a Percentage of One Hour 100%
08	8.0 Additional Information		
	8.1 220 µR		
09	8.2		
10	8.3		
11	8.4		
12	8.5		
13	Surveyor Information [redacted]	Surve [redacted]	Date of Survey 3-5-2011 / Surveying Agency Code

Remarks:

FAA Form 165-17 (6-81)

SGS Document# DOEO-0014, Rev. Jun 81

FAA HQ

3767735 MT 23903 Reco (1)

SIEMENS

Siemens Government Services, Inc.

Cabinet X-Ray Unit Radiation Survey Form (non-AT)

WO#: 3767735

Location: BOS- US Air main CP Background Reading: 6 µR/hr Date: 3-5-2011

1. Identify Cabinet X-ray Unit and X-ray Generator information:
   a. Check appropriate Make/Model box below (if '**Other**', record Make and Model on the line provided);
   b. Record the X-ray Unit's serial number next to the Make/Model;
   c. With the X-rays turned "**ON**", record the X-ray Generator Voltage (**kV**) and Anode Current (**µA**) Readings;
   d. Convert Anode Current readings from **µA** to **mA** by dividing the µA value by 1000 (**example: 100 µA = 0.100 mA**);
   e. Transfer the **Observed Voltage and Converted Anode Current** readings to **Box 05, Section 7.2** (Technical Factures) of DOEO-0014 FAA Form 165-17.

Make / Model	Serial Number	Observed Voltage and Anode Current	Convert Anode Current to mA for FAA form (divide µA by 1000)
☐ Smiths Heimann **5030s**	s/n_____	+_____kV, -_____kV,_____ µA	_____mA
☐ Smiths Heimann **6040i**	s/n_____	+_____kV, -_____kV,_____ µA	_____mA
☐ Smiths Heimann **7555i**	s/n_____	+_____kV, -_____kV,_____ µA	_____mA
☐ Rapiscan **519**	s/n_____	_____kV, _____ µA	_____mA
☐ Rapiscan **520B**	s/n_____	_____kV, _____ µA	_____mA
☒ Rapiscan **522B**	s/n 7003203	141 kV, 716 µA	.716 mA
☐ Other _____	s/n_____	_____kV, _____ µA	_____mA

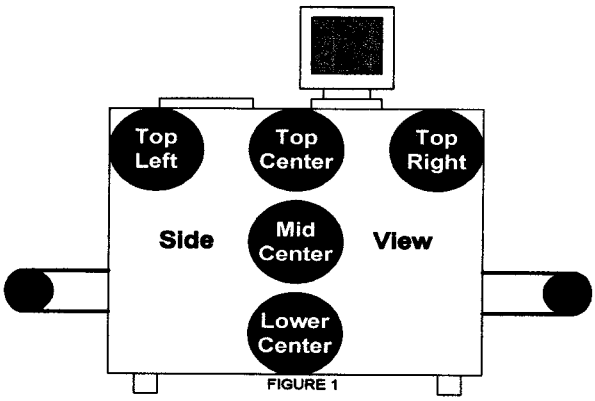

FIGURE 1

2. While holding the meter 5 centimeters (about 2 inches) from the surface, take readings in the area of the circles shown (Figure 1 above) on **BOTH** sides (Left and Right) of the X-ray machine (total of **10** readings):

   Note: The Inovision 451P Radiation Meter has a default range setting of **µR/hr**. Meter readings in µR/hr must be converted to mR/hr for this form and DOEO-0014 FAA Form 165-17.
   Conversion: 100 µR/hr = 0.100 mR/hr.

FRONT		BACK	
TOP LEFT	.008 mR/hr	TOP LEFT	.023 mR/hr
TOP CENTER	.020 mR/hr	TOP CENTER	.043 mR/hr
TOP RIGHT	.012 mR/hr	TOP RIGHT	.020 mR/hr
MID CENTER	.024 mR/hr	MID CENTER	.028 mR/hr
LOWER CENTER	.015 mR/hr	LOWER CENTER	.012 mR/hr

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SIEMENS

Siemens Government Services, Inc.

WO#: 3767735

X-Ray Serial #: 7003203

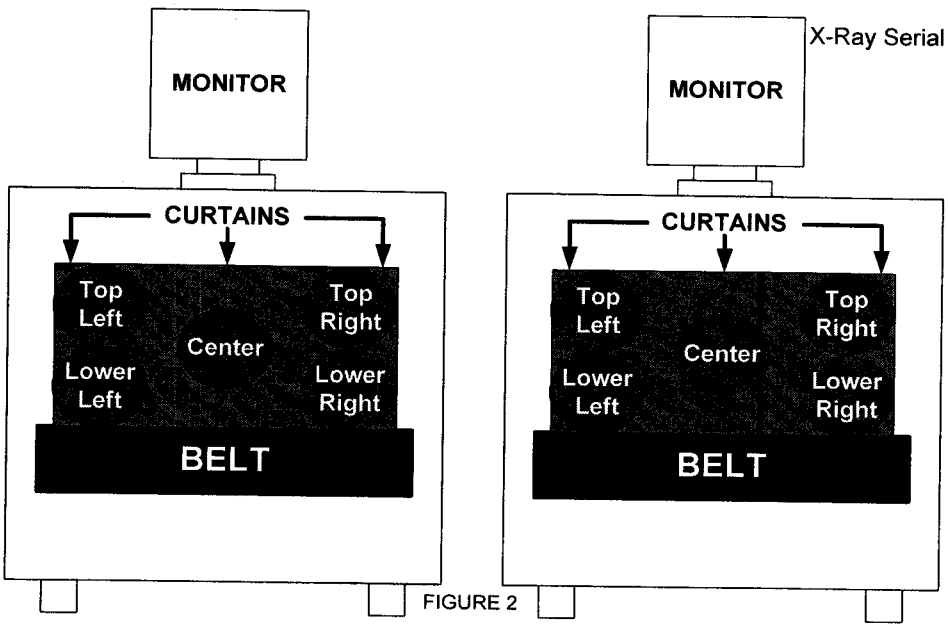

FIGURE 2

3. While holding the meter 5 centimeters (about 2 inches) from the surface, take readings in the area of the circles shown (Figure 2 above) on **BOTH** sides (ENTRANCE and EXIT) of the X-ray machine (total of **10** readings):

ENTRANCE		**EXIT**	
TOP LEFT	.127 mR/hr	TOP LEFT	.053 mR/hr
TOP RIGHT	.150 mR/hr	TOP RIGHT	.055 mR/hr
LOWER LEFT	.081 mR/hr	LOWER LEFT	.050 mR/hr
LOWER RIGHT	.110 mR/hr	LOWER RIGHT	.048 mR/hr
CENTER	.149 mR/hr	CENTER	.065 mR/hr

4. Transfer the **8 highest** readings (out of **all 20** readings) to **Box 05, Section 7.3** (Exposure Levels) of DOEO-0014 FAA Form 165-17. Be sure to enter values in **mR/hr!! (100 µR/hr = 0.100 mR/hr)**.

   Note: On all X-Ray equipment, any reading of **0.5 mR/h (= 500 µR/h) or higher** is considered a **failure** of the Radiation Leak Survey.

5. Perform **Cumulative Exposure Test:**
   a. Push the MODE button once on the Inovision 451P;
   b. Verify that the meter's scale changes from **µR/h** to **µR** (Cumulative Mode);
   c. Place the meter on the belt and run through the X-Ray beam 10 times in Cumulative Mode. **Record total here:** 2200 µR
   d. Divide the cumulative exposure value by 10 to obtain the **Dosage per Inspection**;
   e. Record this result in Section 8.1 (Additional Information) of DOEO-0014 FAA Form 165-17.

Survey Performed By (print your name): [redacted]

Signature: [redacted] **Date:** 3-5-2011

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