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) (Required 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 Address of Facility and Specific Location of X-ray System

Name of Facility (18.80): Piedmont Triad Int. Airport
FDA Region: NC
St. No. R.R. or Airline/Airport (10.80): GSO
City (10.73): Greensboro
State Code: NC
Zip Code: 27409
Room No. or Other Location of System (10.32): N. Chkpt. Ln 2
Person Interviewed (82.54): [redacted]
Telephone No.: [redacted]
Certification Label Present: Yes
Instrument Type and Serial Number: Inovision Model: 451P Serial No: 0665

01 1.2 Manufacture And Product ID

A. Manufacture (Responsible Firm): Rapiscan Systems Inc
B: DHU46
C. System Model No. and/or Name: 520B TRX
D. Unique I.D.: 115 VAC 60 Hz
E. System Serial No.: 7021502
F. Date of Manufacture: Mo. 04 Yr. 02
1.4 Operator Instructions Available: Yes
1.5 Maintenance Schedule Available: N/A

2.0 Warning Labels Indications

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 "Int. Meter"): Yes
2.4 At Least One Indicator, X-Ray Marked "X-Ray On", Visible from Each Port, Door, And Access Panel: Yes

02 3.0 Door Safety Interlocks

3.0 Interlocks
3.1 "Captured Key" Control: Yes
A. Minimum Number of Interlocks Visible At Any One Door: N/A
B. At Least One Interlock Dependent on No Moving Part Except 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. 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: M
7.1 Scatter Block Description: 1400 Pelican Case for 451 Meter

7.2 Technical Factors: 140 kVp .7 mA

05 / **06**

7.3 Location	Exposure Levels	Non-Continuously Activated Systems Only Number of Exposures Initiated	Location	Exposure Levels	Non-Continuously Activated Systems Only Number of Exposures Initiated
	.050 mR/hr	Exp		.038 mR/hr	exp
	.049 mR/hr	Exp		.038 mR/hr	exp
	.041 mR/hr	exp		.035 mR/hr	exp
	.040 mR/hr	exp		.033 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
8.1 130 μR
8.2
09 8.3
10 8.4
11 8.5
12

13 Surveyor Information: [redacted]
Date of Survey: 3/24/11
Surveying Agency Code:

Remarks

FAA Form 165-17 (6-61)

FAA HQ

SIEMENS

Siemens Government Services, Inc.

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

WO#: 3755264

Location: N. Chkpt. Ln 2 Background Reading: 4 µR/hr Date: 3/24/11

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 7021502	140 kV, 700 µA	.7 mA
☐ Rapiscan 522B	s/n	kV, µA	mA
☐ Other	s/n	kV, µA	mA

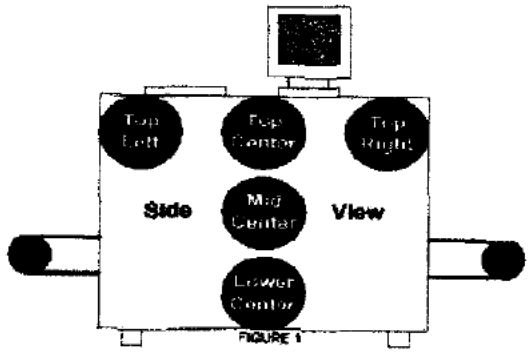

FIGURE 1

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	.017 mR/hr	TOP LEFT	.005 mR/hr
TOP CENTER	.014 mR/hr	TOP CENTER	.007 mR/hr
TOP RIGHT	.016 mR/hr	TOP RIGHT	.005 mR/hr
MID CENTER	.026 mR/hr	MID CENTER	.010 mR/hr
LOWER CENTER	.020 mR/hr	LOWER CENTER	010 mR/hr

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SIEMENS

Siemens Government Services, Inc.

WO#: 3755264

X-Ray Serial #: 7021502

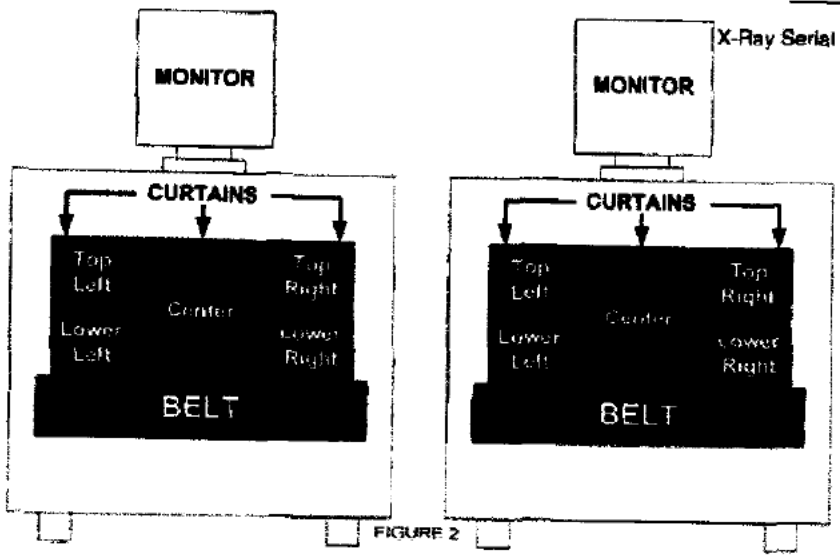

FIGURE 2

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	.041	mR/hr	TOP LEFT	.033	mR/hr
TOP RIGHT	.038	mR/hr	TOP RIGHT	.035	mR/hr
LOWER LEFT	.031	mR/hr	LOWER LEFT	.038	mR/hr
LOWER RIGHT	.027	mR/hr	LOWER RIGHT	.040	mR/hr
CENTER	.049	mR/hr	CENTER	.050	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:** 1.30 mR
   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:** 3/24/11

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