

The information in this report is required by 14 CFR 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) <small>(Require by 14 CFR 108.17, 14 CFR 129.26)</small>		FIELD TEST SERIAL NO. 11-7 T	Form Approved OMB No. 2120-0098	
AA	1.1 Name and Address of Facility	Name of Facility (18.80) Cleveland Hopkins Int'l Apt OH		FDA Region OH	St. No. R.R. or Airline/Airport (10.80) 5300 Riverside Dr	
CC	Address of Facility	City (10.73) Cleveland		State Code OH	Zip Code 44135	
DD	and Specific Location of X-ray System	Room No. or Other Location of System (10.32) C Capt / Tanes		[Redacted]		
01	1.2 Manufacture And Product ID	A. Manufacture (Responsible Firm) KAPISCAN		B. Model: 457 P	C. System Model No. and/or Name 000000528	
		D. 110v Unique I.D. 60Hz		E. System Serial No. 7012407		
		F. Date of Manufacture Mo. 06 Yr. 2001		1.4 Operator Instructions Available yes	1.5 Maintenance Schedule Available N/A	
		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 yes		
		3.2 Door Safety Inter-Locks A. Minimum Number of Interlocks Visible At Any One Door N/A		3.1 "Captured Key" Control yes		
		B. At Least One Interlock Dependent on No Moving Part Except Door N/A		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		
03	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		
	7.0 Leakage Radiation	Specific Test Procedure Used 04		7.1 Scatter Block Description Pelican Case		
05	7.2 Technical Factors 198 kVp .7 mA					
	7.3 Location Exposure Levels		Non-Continuously Activated Systems Only Number of Exposures Initiated		Location Exposure Levels	
	.090 mR/hr		Exp		.077 mR/hr exp	
	.086 mR/hr		Exp		.071 mR/hr exp	
	.084 mR/hr		exp		.068 mR/hr exp	
.082 mR/hr		exp		.065 mR/hr exp		
06	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 Dosage per inspection - 198 uR					
09	8.2					
10	8.3					
11	8.4					
12	8.5					
13	Surveyor Information	[Redacted]		Date of Survey	3/11/11	
Remarks:						

Siemens Government Services, Inc.

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

WO#: 3725546

Location: C Aupt / Lane 5

Background Reading: 3  $\mu\text{R/hr}$

Date: 3/11/11

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 ( $\mu\text{A}$ ) Readings;
  - d. Convert Anode Current readings from  $\mu\text{A}$  to mA by dividing the  $\mu\text{A}$  value by 1000 (example:  $100 \mu\text{A} = 0.100 \text{ mA}$ );
  - e. Transfer the **Observed Voltage and Converted Anode Current** readings to **Box 05, Section 7.2** (Technical Factures) of DOE0-0014 FAA Form 165-17.

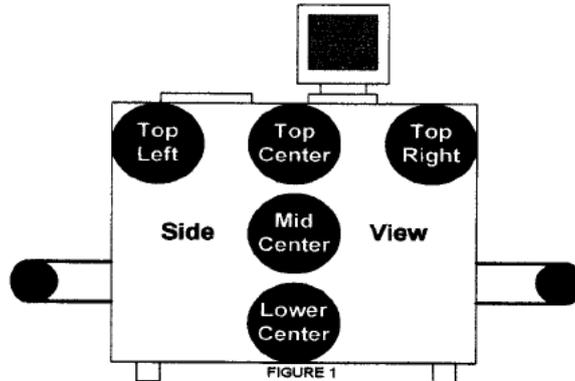
**Make / Model**

**Serial Number**

**Observed Voltage and Anode Current**

**Convert Anode Current to mA for FAA form (divide  $\mu\text{A}$  by 1000)**

<input type="checkbox"/> Smiths Heimann 5030s	s/n _____	+ _____ kV, - _____ kV, _____ $\mu\text{A}$	_____ mA
<input type="checkbox"/> Smiths Heimann 6040I	s/n _____	+ _____ kV, - _____ kV, _____ $\mu\text{A}$	_____ mA
<input type="checkbox"/> Smiths Heimann 7555I	s/n _____	+ _____ kV, - _____ kV, _____ $\mu\text{A}$	_____ mA
<input type="checkbox"/> Rapiscan 519	s/n _____	_____ kV, _____ $\mu\text{A}$	_____ mA
<input checked="" type="checkbox"/> Rapiscan 520B	s/n <u>7012407</u>	<u>198</u> kV, <u>700</u> $\mu\text{A}$	<u>.7</u> mA
<input type="checkbox"/> Rapiscan 522B	s/n _____	_____ kV, _____ $\mu\text{A}$	_____ mA
<input type="checkbox"/> Other _____	s/n _____	_____ kV, _____ $\mu\text{A}$	_____ mA



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  $\mu\text{R/hr}$ . Meter readings in  $\mu\text{R/hr}$  must be converted to mR/hr for this form and DOE0-0014 FAA Form 165-17.  
**Conversion:**  $100 \mu\text{R/hr} = 0.100 \text{ mR/hr}$ .

**FRONT**

**BACK**

TOP LEFT	<u>.005</u> mR/hr	TOP LEFT	<u>.006</u> mR/hr
TOP CENTER	<u>.007</u> mR/hr	TOP CENTER	<u>.005</u> mR/hr
TOP RIGHT	<u>.004</u> mR/hr	TOP RIGHT	<u>.003</u> mR/hr
MID CENTER	<u>.003</u> mR/hr	MID CENTER	<u>.004</u> mR/hr
LOWER CENTER	<u>.002</u> mR/hr	LOWER CENTER	<u>.002</u> mR/hr

Cabinet X-Ray Unit Radiation Survey Form (non-AT)	Version: 6	Effective Date: Apr 2, 2010	Document No.: F-ALL-049	Page: 1 of 2
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WO#: 3725544  
 X-Ray Serial #: 7012407

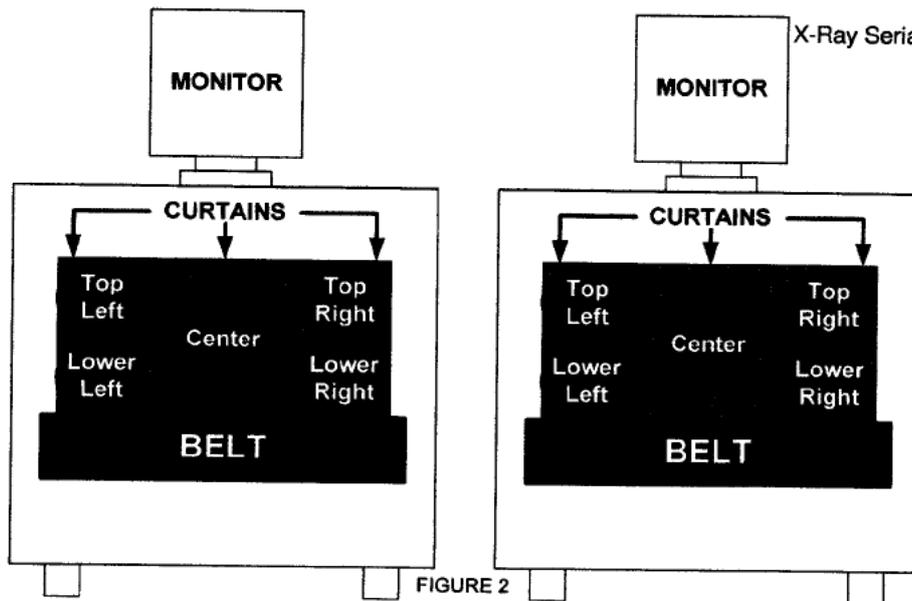


FIGURE 2

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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):

<u>ENTRANCE</u>		<u>EXIT</u>	
TOP LEFT	<u>.084</u> mR/hr	TOP LEFT	<u>065</u> mR/hr
TOP RIGHT	<u>.082</u> mR/hr	TOP RIGHT	<u>.084</u> mR/hr
LOWER LEFT	<u>.090</u> mR/hr	LOWER LEFT	<u>.041</u> mR/hr
LOWER RIGHT	<u>.048</u> mR/hr	LOWER RIGHT	<u>.077</u> mR/hr
CENTER	<u>.040</u> mR/hr	CENTER	<u>.071</u> 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  $\mu$ R/hr = 0.100 mR/hr).

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

5. Perform **Cumulative Exposure Test:**
- Push the MODE button once on the Invision 451P;
  - Verify that the meter's scale changes from  $\mu$ R/h to  $\mu$ R (Cumulative Mode);
  - Place the meter on the belt and run through the X-Ray beam 10 times in Cumulative Mode. **Record total here:** 1.48 mR
  - Divide the cumulative exposure value by 10 to obtain the **Dosage per Inspection;**
  - Record this result in Section 8.1 (Additional Readings) of FAA Form 165-17.

Survey Performed by: [Redacted]

Signature: [Redacted]

Date: 3/11/11

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