

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	Name of Facility (18.80) Memphis Intl. Airport.		FDA Region MEM	St. No. R.R. or Airline/Airport (10.80) 2495 Winchester Rd.	
CC	Address of Facility	City (10.73) Memphis		State Code TN	Zip Code 38116	
DD	and Specific Location of X-ray System	Room No. or Other Location of System (10.32) C-ckpt		Telephone		
01	1.2 Manufacture And Product ID	A. Manufacture (Responsible Firm) Smiths Heimann		B. HS	C. System Model No. and/or Name 6040 I	
		D. 120VAC 60Hz Unique I.D.		E. System Serial No. 20706	Serial No. 0334	
		F. Date of Manufacture Mo. 3 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 3.1 "Captured Key" Control Yes		
		3.2 Door Safety Inter-Locks		A. All Doors and Access Panels That Were Tested Prevent Generation of X-Radiation N/A		
	A. Minimum Number of Interlocks Visible At Any One Door N/A		3.3 Prevention of X-Radiation By Interlocks		B. Use of X-Ray Control Necessary to Resume Operation Following Interruption N/A	
	B. At Least One Interlock Dependent on No Moving Part Except Door 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 Tool Bag		
05	7.2 Technical Factors +70.50 - 68.21 kVp .358 mA					
	7.3 Location Levels		Non-Continuously Activated Systems Only Number of Exposures Initiated		Location Exposure Levels Non-Continuously Activated Systems Only Number of Exposures Initiated	
	.003 mR/hr		Exp		.071 mR/hr exp	
	.003 mR/hr		Exp		.070 mR/hr exp	
	.003 mR/hr		exp		.062 mR/hr exp	
.003 mR/hr		exp		.059 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					
09	8.1 Dosage per Inspection 71 uR					
10	8.2					
11	8.3					
12	8.4					
13	8.5					
13	Surveyor Information	Surveyor Signature		Date of Survey	Surveying Agency Code	
Remarks: This unit is in good working order.						

Siemens Government Services, Inc.

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

WO#: 3259480

Location: C-ckpt Ln 3

Background Reading: .002 $\mu\text{R/hr}$

Date: 3/05/11

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: $100 \mu\text{A} = 0.100 \text{ mA}$);
 - e. Transfer the Observed Voltage and Converted Anode Current readings to Box 05, Section 7.2 (Technical Factures) of DOE-0014 FAA Form 165-17.

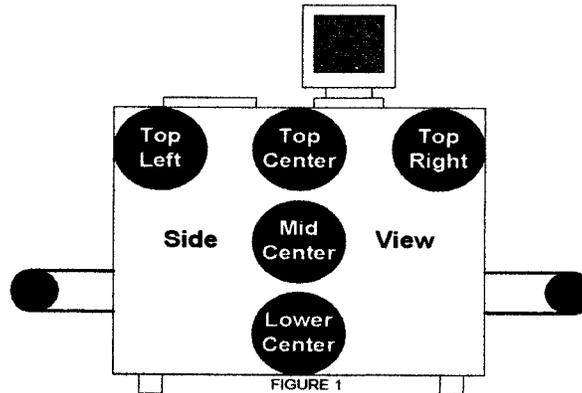
Make / Model

Serial Number

Observed Voltage and Anode Current

Convert Anode Current to mA for FAA form (divide μA by 1000)

<input type="checkbox"/> Smiths Heimann 5030s	s/n _____	+ _____ kV, - _____ kV, _____ μA	_____ mA
<input checked="" type="checkbox"/> Smiths Heimann 6040i	s/n <u>20706</u>	+ <u>70.50</u> kV, - <u>68.21</u> kV, <u>398.25</u> μA	<u>.398</u> mA
<input type="checkbox"/> Smiths Heimann 7555i	s/n _____	+ _____ kV, - _____ kV, _____ μA	_____ mA
<input type="checkbox"/> Rapiscan 519	s/n _____	_____ kV, _____ μA	_____ mA
<input type="checkbox"/> Rapiscan 520B	s/n _____	_____ kV, _____ μA	_____ mA
<input type="checkbox"/> Rapiscan 522B	s/n _____	_____ kV, _____ μA	_____ mA
<input type="checkbox"/> Other _____	s/n _____	_____ kV, _____ μA	_____ 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 Invision 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 DOE-0014 FAA Form 165-17.

Conversion: $100 \mu\text{R/hr} = 0.100 \text{ mR/hr}$.

FRONT

BACK

TOP LEFT	<u>.002</u> mR/hr	TOP LEFT	<u>.003</u> mR/hr
TOP CENTER	<u>.002</u> mR/hr	TOP CENTER	<u>.003</u> mR/hr
TOP RIGHT	<u>.002</u> mR/hr	TOP RIGHT	<u>.003</u> mR/hr
MID CENTER	<u>.002</u> mR/hr	MID CENTER	<u>.003</u> mR/hr
LOWER CENTER	<u>.002</u> mR/hr	LOWER CENTER	<u>.003</u> mR/hr

WO#: 3759480

X-Ray Serial #: 20706

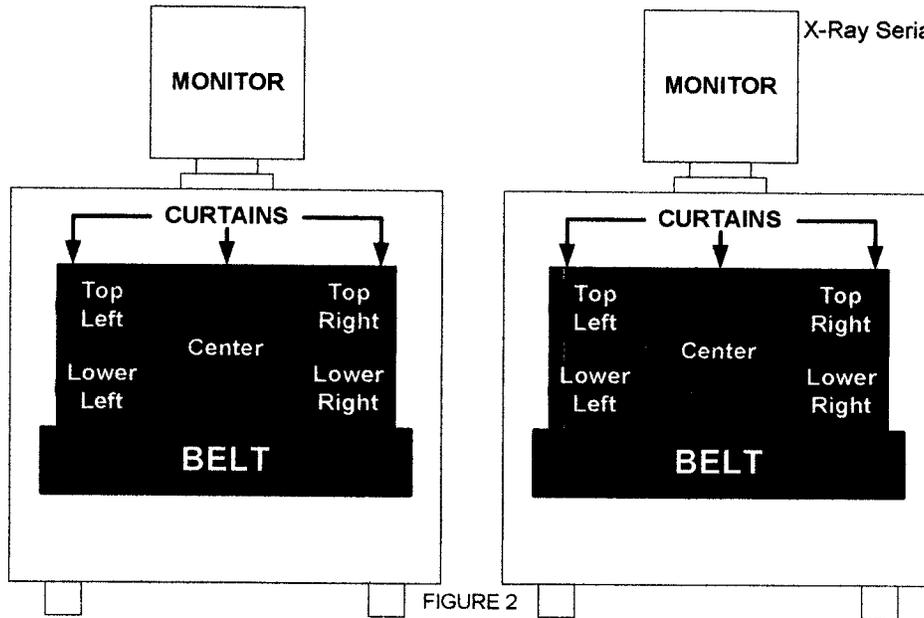


FIGURE 2

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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>.004</u> mR/hr	TOP LEFT	<u>.062</u> mR/hr
TOP RIGHT	<u>.004</u> mR/hr	TOP RIGHT	<u>.070</u> mR/hr
LOWER LEFT	<u>.004</u> mR/hr	LOWER LEFT	<u>.059</u> mR/hr
LOWER RIGHT	<u>.004</u> mR/hr	LOWER RIGHT	<u>.052</u> mR/hr
CENTER	<u>.005</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 DOE0-0014 FAA Form 165-17. Be sure to enter values in mR/hr!! (100 μ R/hr = 0.100 mR/hr).

Note: On all X-Ray equipment, any reading of 0.5 mR/h (= 500 μ 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 μ R/h to μ R (Cumulative Mode);
 - Place the meter on the belt and run through the X-Ray beam 10 times in Cumulative Mode. Record total here: 710
 - Divide the cumulative exposure value by 10 to obtain the **Dosage per Inspection**;
 - Record this result in Section 8.1 (Additional Information) of DOE0-0014 FAA Form 165-17.

Survey Performer: _____

Signature: _____ Date: 3/5/11