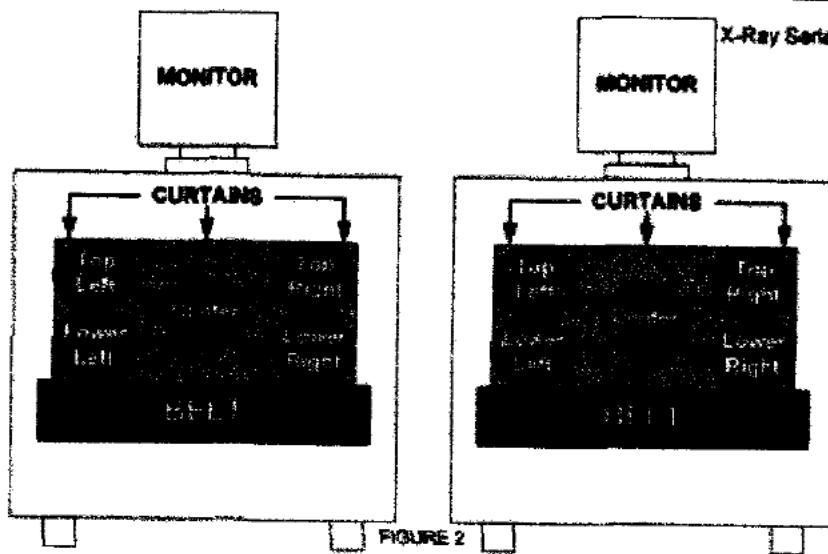


The information in this report is required by 14 CFR 108.17 & 129.26. Failure to report may result in a civil penalty not to exceed \$1000.00 for each such violation. (Federal Aviation Act of 1988, Section 801)

Department of Transportation Federal Aviation Administration			X-RAY SYSTEM/RADIATION LEAKAGE REPORT (BAGGAGE INSPECTION) (Revised by 14 CFR 108.17, 14 CFR 129.26)		FIELD TEST SERIAL NO. 11-T T	Form Approved OMB No. 2120-0088
AA	1.1 Name and Address of Facility CAB 1078 Richmond	Name of Facility (10-30) RIC Richmond Int. Airport	VA	10A Location [Redacted]	10B Name of Test Report (10-30) 1 Richard E Byrd Term Dr.	10C Date VA 23250
CC	and Specific Location of X-ray System	Room No. or Other Location of System (10-30) Along C.P. Ln. 3	[Redacted]	Telephone No. [Redacted]		
DD	1.2 Manufacturer and Product ID Rapidian Systems	1.3 Model Number 115 Unique ID. 60	1.4 System Serial No. 0H446	1.5 System Model No. Under Name 520B		
01	1.6 Date of Manufacture 03 " 2006	1.7 Operator Rapidian Systems	1.8 System Serial No. 7061205	1.9 Maintenance Schedule Available YES	1.10 Maintenance Schedule Available N/A	
	2.0 Warning Labels Present at Control Station: "Caution X-ray Produces When Energized" Yes	2.1 Warning Labels Present at Power Station: "Caution: Do Not Insert Any Part of the Body Within System is Energized. X-ray Hazard" Yes	2.2 Two Indicators Lit "X-ray On" Present in Control (One May Be Lit/red and Other) Yes	2.3 Two Indicators Lit "X-ray On" Present in Control (One May Be Lit/red and Other) Yes		
02	2.4 All Level One Indicator, X-ray Method "X-ray On", Visible From Each Port, Door, And Access Panel N/A	2.5 Prevention of X-Radiation By Interlock By Interlock	2.6 All Doors and Access Panels That Have Tools Prevent Generation of X-Radiation N/A	2.7 Use of X-Ray Control Necessary to Reduce Radiation Following Interruption N/A		
03	3.0 Parts Under 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	4.3 Some Part of the Body Can Be Inserted into the Aperture NO		
	5.0 Baggage Inspection System	5.1 Means Provided to Ensure Operator Presence at the Control Area YES	5.2 Means Provided to Operator to Turn-Off Excessive or Greater than One-Half Second and Prewarning YES	5.3 Means Provided to Operator to Turn-Off Excessive or Greater than One-Half Second and Prewarning YES		
05	7.2 Exposure Factors Exposure Levels 0.19 milli 0.09 milli 0.09 milli 0.07 milli	7.3 Location Non-Community Associated Systems Only Number of Components Tested 0.09	7.4 Exposure Levels 0.09 0.09 0.09 0.09	7.5 Location Non-Community Associated Systems Only Number of Components Tested 0.09	7.6 Exposure Levels 0.09 0.09 0.09 0.09	7.7 Duty Cycle of System Indicated At a Percentage of One Hour 30%
07	Representative Number of Exposures That May Be Initiated in One Hour				Duty Cycle of System Indicated At a Percentage of One Hour	
08	220 UR				30%	
09	UR					
10	UR					
11	UR					
12	UR					
13	Surveyor Information Name	Date of Survey 03/09/11	Surveyor Agency/City [Redacted]			
Remarks						

WOR 3714330

X-Ray Serial #: 7061205



Printed copies of this document must be verified against the
Document Server or Internet for correct revision level before

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

TOP LEFT	<u>.068</u> mR/hr	TOP LEFT	<u>.070</u> mR/hr
TOP RIGHT	<u>.071</u> mR/hr	TOP RIGHT	<u>.078</u> mR/hr
LOWER LEFT	<u>.070</u> mR/hr	LOWER LEFT	<u>.087</u> mR/hr
LOWER RIGHT	<u>.078</u> mR/hr	LOWER RIGHT	<u>.091</u> mR/hr
CENTER	<u>.109</u> mR/hr	CENTER	<u>.119</u> mR/hr

EXIT

4. Transfer the 8 highest readings (out of all 10 readings) to Box 66, Section 7.3 (Exposure Levels) of DOEO-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 0.6 mR/hr (= 600 μ R/hr) or higher is considered a failure of the Radiation Leak Survey.

5. Perform Cumulative Exposure Test:

- a. Push the MODE button once on the Invivision 451P;
- b. Verify that the meter's scale changes from μ R/hr to μ R (Cumulative Mode);
- c. Place the meter on the belt and run through the X-Ray beam 10 times in Cumulative Mode. Record total here: 23.00 μ R
- d. Divide the cumulative exposure value by 10 to obtain the Dosage per Inspection;
- e. Record this result in Section 6.1 (Additional Information) of DOEO-0014 FAA Form 165-17.

Survey Performed By (print your name): XXXXXXXXXX

Signature: XXXXXXXXXX

Date: 03/09/2011

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Cabinet X-Ray Unit Radiation Survey Form

WOR 3714330

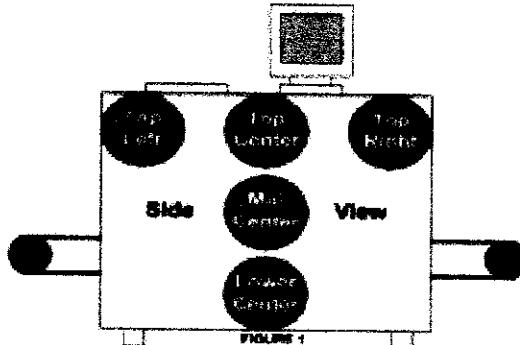
Location: Alpha CP Ln. 3

Background Reading: .26 $\mu\text{R/hr}$

Date: 03/09/2011

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 $\mu\text{A} = 0.100$ mA);
 - e. Transfer the Observed Voltage and Converted Anode Current readings to Box 86, Section 7.2 (Technical Factors) 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)
<input type="checkbox"/> Smiths Helmann 6030s	sn. _____	+ ____ kV. - ____ kV. ____ μA	____ mA
<input type="checkbox"/> Smiths Helmann 6040s	sn. _____	+ ____ kV. - ____ kV. ____ μA	____ mA
<input type="checkbox"/> Smiths Helmann 7666s	sn. _____	+ ____ kV. - ____ kV. ____ μA	____ mA
<input type="checkbox"/> Rapiecan 519	sn. _____	____ kV. ____ μA	____ mA
<input checked="" type="checkbox"/> Rapiecan 520B	sn. <u>7d.1205</u>	<u>140</u> kV. <u>700</u> μA	<u>700</u> mA
<input type="checkbox"/> Rapiecan 522B	sn. _____	____ kV. ____ μA	____ mA
<input type="checkbox"/> Other _____	sn. _____	____ 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 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 DOEO-0014 FAA Form 165-17.
Conversion: 100 $\mu\text{R/hr} = 0.100$ mR/hr.

FRONT

TOP LEFT	<u>.032</u>	mR/hr	TOP LEFT	<u>.015</u>	mR/hr
TOP CENTER	<u>.027</u>	mR/hr	TOP CENTER	<u>.011</u>	mR/hr
TOP RIGHT	<u>.021</u>	mR/hr	TOP RIGHT	<u>.009</u>	mR/hr
MID CENTER	<u>.033</u>	mR/hr	MID CENTER	<u>.009</u>	mR/hr
LOWER CENTER	<u>.028</u>	mR/hr	LOWER CENTER	<u>.009</u>	mR/hr

BACK

TOP LEFT	<u>.015</u>	mR/hr
TOP CENTER	<u>.011</u>	mR/hr
TOP RIGHT	<u>.009</u>	mR/hr
MID CENTER	<u>.009</u>	mR/hr
LOWER CENTER	<u>.009</u>	mR/hr

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