

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) (Require by 14 CFR 108.17, 14 CFR 129.26)		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) Tulsa International Airport		FDA Region OK	St. No. R.R. or Airline/Airport (10.80) 7777 E. Apache Rd.	
CC	Address of Facility	City (10.73) Tulsa		State Code OK	Zip Code 74115	
DD	and Specific Location of X-ray System	Room No. or Other Location of System (10.32) Main Lane 3		Person Interview (33-54) [REDACTED]	Telephone No. [REDACTED]	
		Certification Label Present Yes		Instruments: (type and serial number) RadEye Model: PRD-ER Serial No. 0331		
01	1.2 Manufacture And Product ID	A. Manufacture (Responsible Firm) Smiths Detection		B. HS	C. System Model No. and/or Name 6040i	
		D. 115 VAC 60 HZ Unique I.D.	E. System Serial No. 40030			
	F. Date of Manufacture Mo. Mar Yr. 2002	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		
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		
		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	
	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 94		7.1 Scatter Block Description Two Paper Reams		
	7.2 Technical Factors 137 kVp .394 mA					
05	7.3 Location Exposure Levels	Non-Continuously Activated Systems Only Number of Exposures Initiated		Location Exposure Levels		
	.118 mR/hr		06	.072 mR/hr		
	.110 mR/hr			.011 mR/hr		
	.090 mR/hr			.009 mR/hr		
.082 mR/hr		.008 mR/hr				
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 .146 uR Dosage Per Inspection					
09	8.2					
10	8.3					
11	8.4					
12	8.5					
13	Surveyor Information	Surveyor Name (10-72) (Print: L, F, MI)	Surveyor Signature	Date of Survey	Surveying Agency Code	
Remarks:						

SIEMENS

Siemens Government Services, Inc.

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

WO#: 3713781

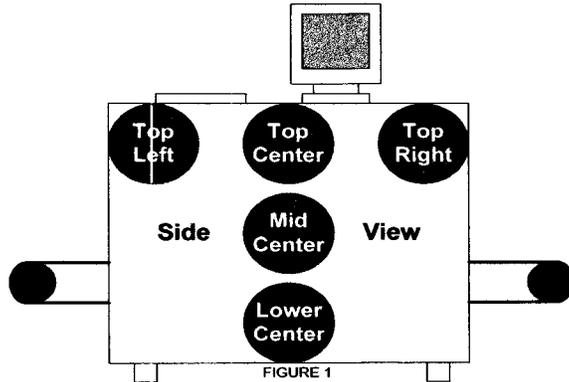
Location: Tul Main Lane 3

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

Date: 4 Mar 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: $100 \mu\text{A} = 0.100 \text{ mA}$);
 - 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.

<u>Make / Model</u>	<u>Serial Number</u>	<u>Observed Voltage and Anode Current</u>		<u>Convert Anode Current to mA for FAA form (divide μA by 1000)</u>
<input type="checkbox"/> Smiths Heimann 5030s	s/n _____	+ _____ kV, - _____ kV,	_____ μA	_____ mA
<input checked="" type="checkbox"/> Smiths Heimann 6040i	s/n <u>40030</u>	+ <u>68.67</u> kV, - <u>68.21</u> kV,	<u>394</u> μA	<u>.394</u> mA
<input type="checkbox"/> Smiths Heimann 7555i	s/n _____	+ _____ kV, - _____ kV,	_____ μA	_____ mA
<input type="checkbox"/> Rapiscan 519	s/n _____	_____ kV, _____ μA	_____ μA	_____ mA
<input type="checkbox"/> Rapiscan 520B	s/n _____	_____ kV, _____ μA	_____ μA	_____ mA
<input type="checkbox"/> Rapiscan 522B	s/n _____	_____ kV, _____ μA	_____ μA	_____ mA
<input type="checkbox"/> Other _____	s/n _____	_____ kV, _____ μA	_____ 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 DOE0-0014 FAA Form 165-17.

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

<u>FRONT</u>		<u>BACK</u>	
TOP LEFT	<u>.004</u> mR/hr	TOP LEFT	<u>.002</u> mR/hr
TOP CENTER	<u>.004</u> mR/hr	TOP CENTER	<u>.002</u> mR/hr
TOP RIGHT	<u>.003</u> mR/hr	TOP RIGHT	<u>.002</u> mR/hr
MID CENTER	<u>.004</u> mR/hr	MID CENTER	<u>.006</u> mR/hr
LOWER CENTER	<u>.004</u> mR/hr	LOWER CENTER	<u>.004</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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SIEMENS

Siemens Government Services, Inc.

WO#: 3713781

X-Ray Serial #: 40030

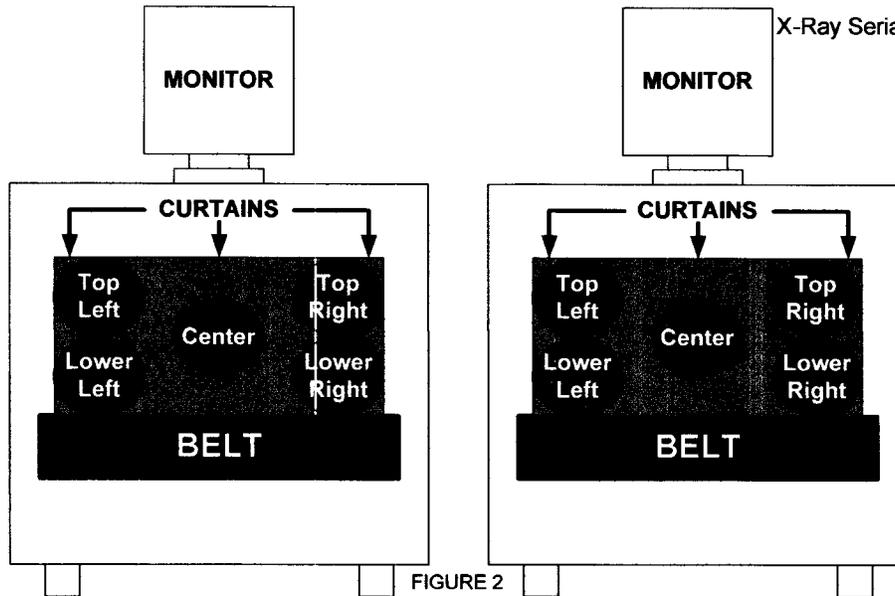


FIGURE 2

Printed copies of this document must be verified against the Document Server or Intranet for correct revision level before being used.

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>.007</u> mR/hr	TOP LEFT	<u>.072</u> mR/hr
TOP RIGHT	<u>.008</u> mR/hr	TOP RIGHT	<u>.082</u> mR/hr
LOWER LEFT	<u>.007</u> mR/hr	LOWER LEFT	<u>.110</u> mR/hr
LOWER RIGHT	<u>.009</u> mR/hr	LOWER RIGHT	<u>.090</u> mR/hr
CENTER	<u>.011</u> mR/hr	CENTER	<u>.118</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:** 1.46 mR
 - 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 Performed By (print your name): _____

Signature: _____

Date: 4 Mar 2011

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Work Order #: **3713781**

Software Version: **HiTrax HX-02-09-S**

Technician Comments: **Power cord retention clip missing informed TSA to open a work order**
Lead curtains need replacing advised TSA to open work order, 3 light bulbs replaced

Customer Comments:

Technician Name: [Redacted]

Technician Signature: [Redacted] Date: **4 Mar 2011**

Customer Name: [Redacted]

Customer Signature: [Redacted] Date: **4 Mar 2011**