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. 2120-0096

AA / CC / DD — 1.1 Name and Address of Facility and Specific Location of X-ray System

Name of Facility (10 Bt): Norfolk International Airport
FDA Region: VA
BB Str. No. R.R. or Airline/Airport (10 Bt): 2200 Norview Ave.
City (10 Bt): Norfolk
State Code: VA
Zip Code: 23518
Room No. or Other Location of System (10 Bt): CP Alpha Ln 4
Person Interview (33 Bt): [redacted]
Telephone No.: [redacted]
Certification Label Present: Yes
Instruments (type and serial number) Model: 451P Serial No.: 0592

01 — 1.2 Manufacture And Product ID

A. Manufacture (Responsible Firm): Smith Heimann
B: HS
C. System Model No. and/or Name: 6040i
D: 120 Unique I.D. 60
E. System Serial No.: 18018
F. Date of Manufacture Mo. 09 Yr. 1999
1.4 Operator Instructions Available: Yes
1.5 Maintenance Schedule Available: N/A

02 — 2.0 Warning Labels Indicators

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
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" Covers: Yes

3.2 Door Safety Inter-Locks

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

5.0 Baggage Inspection Systems
5.1 Means Provided to Ensure Operator Presence at the Control Area: yes
5.2 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: 44
7.1 Scatter Block Description: Pelican 1400 Case

7.2 Technical Factors: 69.58 kvp .398 mA

05 / 06 — 7.3 Location Exposure Levels

Location	Exposure Levels	Non-Continuously Activated Systems Only: Number of Exposures Needed	Location	Exposure Levels	Non-Continuously Activated Systems Only: Number of Exposures Needed
05	.108 mR/hr	Exp	06	.067 mR/hr	exp
	.097 mR/hr	Exp		.029 mR/hr	exp
	.087 mR/hr	exp		.016 mR/hr	exp
	.085 mR/hr	exp		.015 mR/hr	exp

07 Reasonable Number of Exposures That May Be Initiated in One Hour: 50
Duty Cycle of System Indicated As a Percentage of One Hour: 100%

08 — 8.0 Additional Information

8.1 ~~95A~~ AC 85uR
8.2
09 8.2
8.3
10 8.3
8.4
11 8.4
8.5
12 8.5

13 Surveyor Information: [redacted]
Date of Survey: 03/23/11
Surveying Agency Code:

Remarks:

FAA Form 185-17 (6-81)

FAA HQ

SIEMENS
Government Services, Inc.

Form

Cabinet X-Ray Unit Radiation Survey Form

WO#: 3602681

Location: CRF CPA Ln 4 Background Reading: .039 µR/hr Date: 05/22/11

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 95, 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 5030e	s/n ____	+ ____ kV, - ____ kV, ____ µA	____ mA
☑ Smiths Heimann 6040i	s/n 18018	+ 69.58 kV, - 68.67 kV, 398.39 µA	.398 mA
☐ Smiths Heimann 7555i	s/n ____	+ ____ kV, - ____ kV, ____ µA	____ mA
☐ Rapiscan 519	s/n ____	____ kV, ____ µA	____ mA
☐ Rapiscan 520B	s/n ____	____ kV, ____ µA	____ mA
☐ Rapiscan 522B	s/n ____	____ kV, ____ µA	____ mA
☐ Other ____	s/n ____	____ kV, ____ µA	____ mA

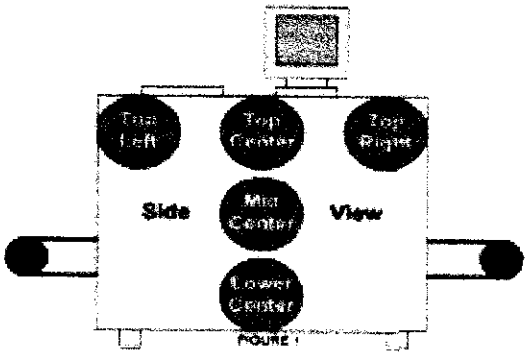

FIGURE 1

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 18 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	.029 mR/hr	TOP LEFT	.009 mR/hr
TOP CENTER	.016 mR/hr	TOP CENTER	.004 mR/hr
TOP RIGHT	.007 mR/hr	TOP RIGHT	.008 mR/hr
MID CENTER	.015 mR/hr	MID CENTER	.009 mR/hr
LOWER CENTER	.011 mR/hr	LOWER CENTER	.010 mR/hr

[redacted]

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SIEMENS
Government Services, Inc.

Form

WO#: 3602681

X-Ray Serial #: 18018

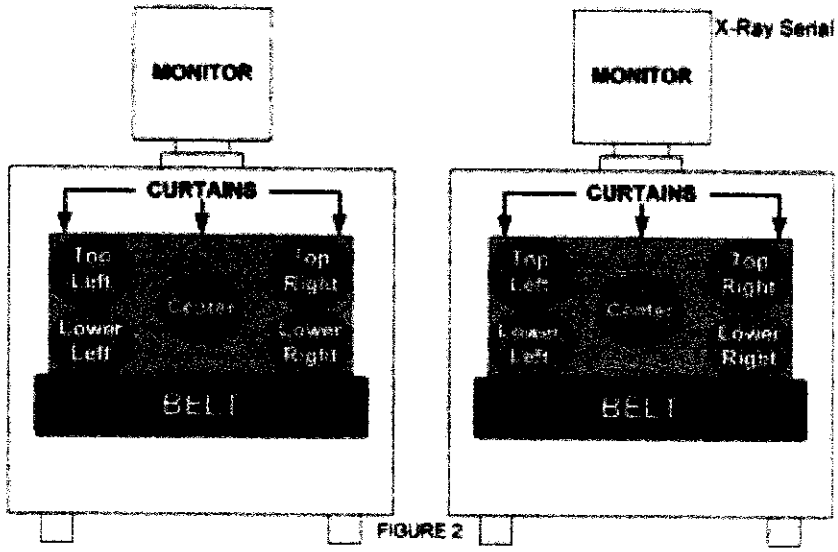

FIGURE 2

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 18 readings).

ENTRANCE			**EXIT**		
TOP LEFT	.014	mR/hr	TOP LEFT	.085	mR/hr
TOP RIGHT	.011	mR/hr	TOP RIGHT	.108	mR/hr
LOWER LEFT	.012	mR/hr	LOWER LEFT	.067	mR/hr
LOWER RIGHT	.003	mR/hr	LOWER RIGHT	.087	mR/hr
CENTER	.007	mR/hr	CENTER	.097	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:** 850 µR
   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:** 03/23/11

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