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)*** *(Require by 14 CRF 108.17, 14 CRF 129.26)* | FIELD TEST SERIAL NO. 11-7 T | Form Approved OMB No. 2120-0098 |
|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| AA | 1.1 Name and Address of Facility and Specific Location of X-ray System | Name of Facility *(18.80)*: Tulsa International Airport | FDA Region: OK | BB St. No. R.R. or Airline/Airport *(10.80)*: 7777 E. Apache Rd. | |
| CC | | City *(10.73)*: Tulsa | State Code: OK | Zip Code: 74115 | |
| DD | | 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. Unique I.D.: 115 VAC 60 HZ | E. System Serial No.: 23539 | | |
| | | 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 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 | |
| 02 | | 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 | A. All Doors and Access Panels That Were Tested Prevent Generation of X-Radiation: N/A | |
| | | B. At Least One Interlock Dependent on No Moving Part Except Door: 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: 04 | 7.1 Scatter Block Description: Two Paper Reams | | |
| 05 | 7.2 Technical Factures | 138 kVp | .393 mA | | |

| 7.3 Location Exposure Levels | Non-Continuously Activated Systems Only Number of Exposures Initiated | 06 Location Exposure Levels | Non-Continuously Activated Systems Only Number of Exposures Initiated |
|---|---|---|---|
| .085 mR/hr | Exp | .067 mR/hr | exp |
| .073 mR/hr | Exp | .009 mR/hr | exp |
| .072 mR/hr | exp | .009 mR/hr | exp |
| .069 mR/hr | exp | .006 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 | | |
| | 8.1 89.1 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): [redacted] | Surveyor Signature: [redacted] | Date of Surrey: 8 Mar 2011 | Surveying Agency Code |

Remarks:

FAA Form 165-17 (6-81)

FAA HQ

SGS Document# DOEO-0014, Rev. Jun 81

# SIEMENS

Siemens Government Services, Inc.

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

WO#: 3713785

Location: Main Lane 2 Background Reading: .002 **µR/hr** Date: 8 March 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 µA = 0.100 mA**);
   e. Transfer the **Observed Voltage and Converted Anode Current** readings to **Box 05, 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 **5030s** | s/n | + kV, - kV, µA | mA |
| ☑ Smiths Heimann **6040i** | s/n 23539 | + 70.04 kV, - 68.21 kV, 393 µA | .393 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 |

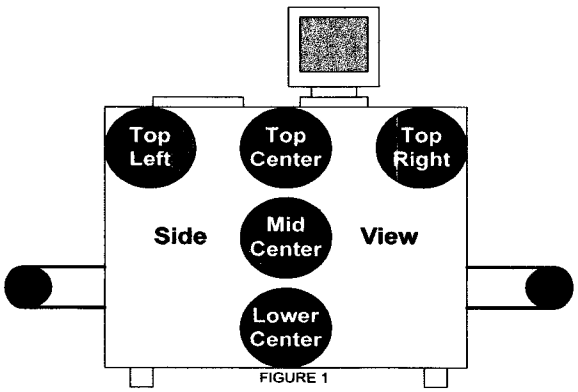

FIGURE 1

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 **10** 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 | .002 mR/hr | TOP LEFT | .003 mR/hr |
| TOP CENTER | .003 mR/hr | TOP CENTER | .002 mR/hr |
| TOP RIGHT | .004 mR/hr | TOP RIGHT | .002 mR/hr |
| MID CENTER | .004 mR/hr | MID CENTER | .002 mR/hr |
| LOWER CENTER | .004 mR/hr | LOWER CENTER | .002 mR/hr |

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# SIEMENS

Siemens Government Services, Inc.

WO#: 3713785

X-Ray Serial #: 23539

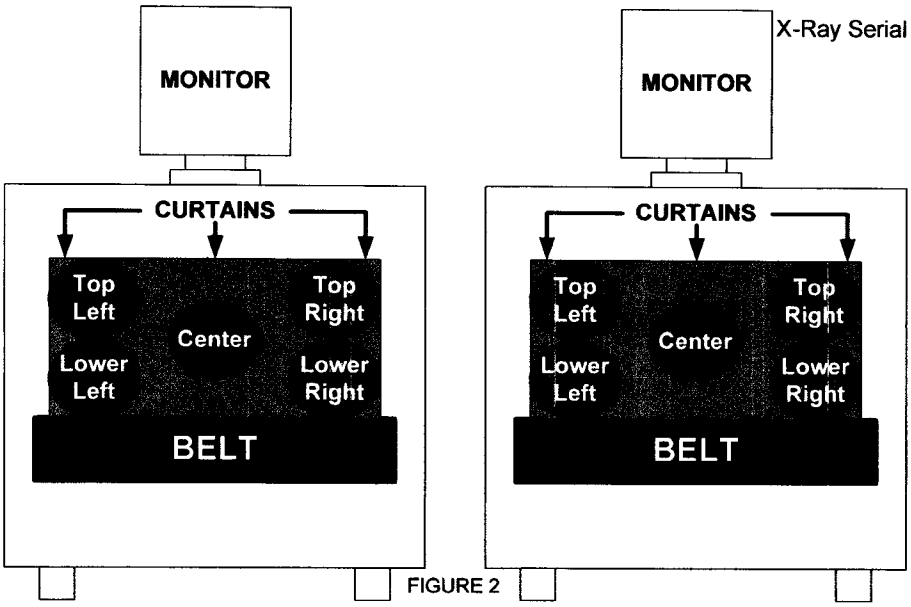


FIGURE 2

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 **10** readings):

| ENTRANCE | | | EXIT | | |
|---|---|---|---|---|---|
| TOP LEFT | .009 | mR/hr | TOP LEFT | .067 | mR/hr |
| TOP RIGHT | .009 | mR/hr | TOP RIGHT | .072 | mR/hr |
| LOWER LEFT | .006 | mR/hr | LOWER LEFT | .073 | mR/hr |
| LOWER RIGHT | .006 | mR/hr | LOWER RIGHT | .069 | mR/hr |
| CENTER | .005 | mR/hr | CENTER | .085 | 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:** 891 uR
   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:** 8 March 2011

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