Rapiscan systems	BAGGAGE/PARCEL CABINET X-RAY SYSTEM RADIATION LEAKAGE REPORT	FIELD SERVICE ENGINEERS	Form R-0588-3 9/9/09 45. RSI W.O.# 3015120 Deferred W.O.#

1. Name of Facility: JFK International Airport	2. Region: New York	3. Street Address: Terminal 7 C/P Ln 4	
4. City: Jamaica		5. State or Province Code: NY	6. Zip Code: 11430
7. Room No. or Other Physical Location of System: Terminal 7 C/P Ln 4	8. Person Interviewed: [redacted]	9. Telephone Number: [redacted]	10. Fax Number: —
11. Manufacture Information & Certification Label Present ☑ Yes - Pass ☐ No - Fail	12. Radiation Measuring Instrument: FSE Shall Attach Copy of Calibration Certificate to This Form Model: 451P-RYR Serial No. 586 Calibration Due Date: 11/24/2010		
Manufacturer: Rapiscan Systems Inc.	13. System Model No.: 620DVAT	14. Single Source ☐ Dual Source ☑ Other ☐, Describe:	15. System Serial No.: 7091211
16. Date of Manufacture Mo. 03 Yr. 2009	18. Facility Owner Has been notified of responsibility for "Application for Registration" with their State Radiation Control Agency ☑ Yes ☐ No	19. Customer has been notified of their responsibility for posting their State "Notice to Employees" Document and Posted in Several Conspicuous Locations so Employees Can View ☑ Yes ☐ No	
17. X-ray Tube Serial Number(s): P-7299, P-7326	20. Operator Instructions Available ☑ Yes - Pass ☐ No - Fail	21. Maintenance Schedule Available ☑ Yes - Pass ☐ No - Fail	
22. Warning Label Present at Controls Stating: "Caution: X-Rays Produced When Energized" ☑ Yes - Pass ☐ No - Fail	23. Warning Labels Present at Ports Stating: "Caution: Do Not Insert Any Part of the Body When System is Energized, X-Ray Hazard" ☑ Yes - Pass ☐ No - Fail	24. Two Indicators Labeled "X-Ray On" Present at Controls (including software user interface) ☑ Yes - Pass ☐ No - Fail	
25. At Least One Indicator, Marked "X-Ray On" is Visible from Each Port ☑ Yes - Pass ☐ No - Fail	26. Captured Key: The Key for the Key Actuated Control Cannot be Removed in Any Mode that Allows X-Ray Generation ☑ Yes - Pass ☐ No - Fail		
27. All Doors and Access Panels To the X-Ray Beam Prevent Generation of X-Radiation ☑ Yes - Pass ☐ No - Fail	28. Some Part of the Body Can Be Inserted Through a Port Into The Primary Beam ☐ Yes ☑ No		
29. Use of X-Ray Control Necessary to Resume Operation Following Interruption ☑ Yes ☐ No	30. Means Provided to Ensure Operator Presence at the Control Area X-ray located in a public access area ☑ Yes - Pass ☐ No - Fail Or X-ray located in a non-public access area ☐ Not Required		
Rapiscan Systems Test Procedure Used: Rapiscan Systems WI-0023-4	31. Scatter Block Description: ☐ Two (2) Reams Copy Paper ☑ Other, Describe: METER CASE	32. Means Provided to Operator for Terminating Exposures of Greater than One-Half Second and Preventing X-rays (E-Stop Test) ☑ Yes - Pass ☐ No - Fail	
33. X-Ray Generator Settings: 160 kVp 1.000 mA	**Note: All Survey Measurements Shall be Obtained at 5 cm from All External Surfaces and at 5 cm from the Plane of All Access Port Openings or Shroud Extension Openings. Scatter Block shall be Stacked and Positioned Centerline of Primary Beam.**		
34.1. Background Radiation: 1 uR/hr		**Maximum External Surface Dose Rate Not to Exceed 500 uR/hr at 5 cm from all external surfaces.**	

34.3 Record All Readings in uR/hr Unless Otherwise Noted

Please see model specific diagram (attached)

36. Overall Condition of Lead Drapes: ☑ SAT - Pass ☐ UNSAT - Fail Description	37. Overall Condition of Machine: ☑ SAT – Pass ☐ UNSAT – Fail	38. Comments, Corrective Active Actions and/or Recommendations: N/A	
39. Surveyor Name (Print: L, F, MI): [redacted]	40. Surveyor Signature: [redacted]	41. Date of Survey: 4/6/10	42. Time of Survey: 9pm

The Surveyor has inspected, tested and certified this x-ray machine is in compliance with U.S FDA 21 CFR 1020.40 and equivalent international radiation emission leakage standards.

43. I ([redacted] have received a copy of this Radiation Survey Report and understand the responsibility to retain this report for State inspection.

Signature: [redacted] TSI Date 4/6/10

This report is to certify this x-ray unit has been surveyed for radiation leakage emissions and found to be within the regulatory radiation emission limit. The safety features, controls and indicators incorporated in the x-ray unit have been satisfactorily tested and/or inspected. The owner of this x-ray unit is responsible for State Radiation Control Agency compliance (not applicable for facilities exclusively operated by the Federal Government) and for the safe use and routine inspection, general maintenance and cleanliness of this x-ray unit. Only trained and qualified individuals should operate this equipment.

APR 58938
PM 3015120

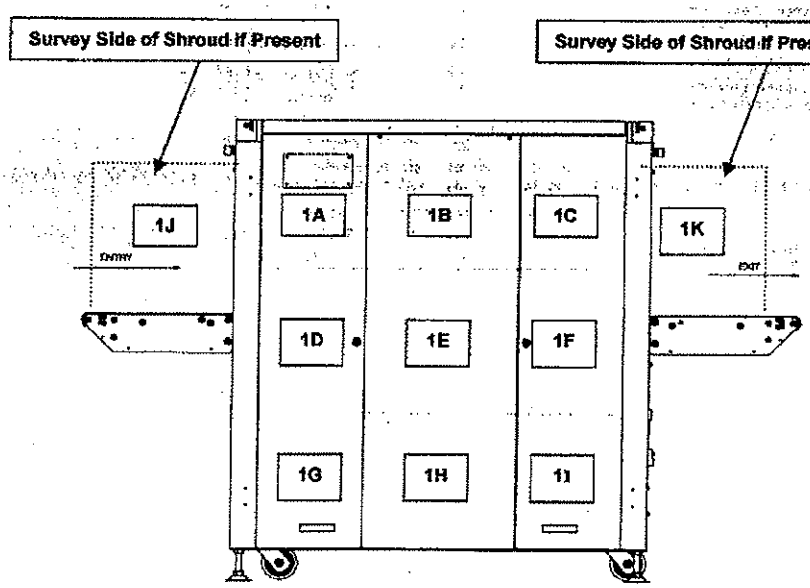
Rapiscan Systems	MODEL 620DV OR 500 SERIES EQUIVALENT RADIATION LEAKAGE SURVEY FORM	MODEL 620DV FSE SURVEY FORM	FORM FSE-R-0047-620DV-1

FIELD SERVICE ENGINEERS RADIATION EMISSION SURVEY

United States and Canada External Surface Radiation Leakage Limit is 5.0 uSv/hr at 5 cm (500 uR/hr)

Global External Surface Radiation Leakage Limit is 1.0 uSv/hr at 5 cm (100 uR/hr at 5 cm)

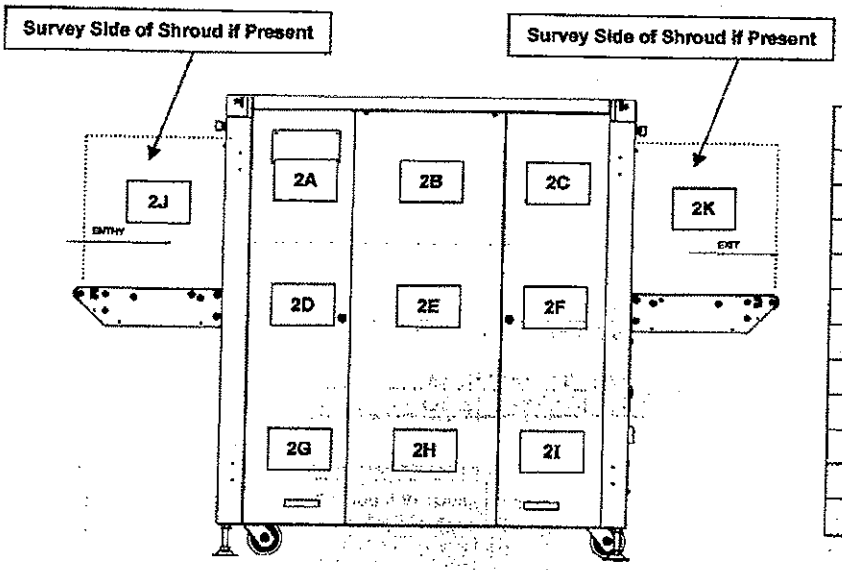
Date: 4/6/10	Location Manufactured: (Check One) ___ Malaysia ___ UK ✓ US	Instrument Model No: 451P-RYR
Time: 9pm	Date of Mfg: 03/2009	Instrument Serial No: 586
Background: ___ uSv/hr (1 uR/hr)	Serial No: 709/211	Instrument Calibration Due: 11/24/10
All Measurements Recorded In: ___ uSv/hr ✓ uR/hr (Check One)	Settings: 160 kvP 1.000 mA Settings: 160 kvP 1.000 mA	Description of Scatter Body: (Check One) ___ Paper (2 Reams, 500 sheets each) ___ Wood Block (4" x 4" x 12" L) ✓ Other METER CASE



Operators Side

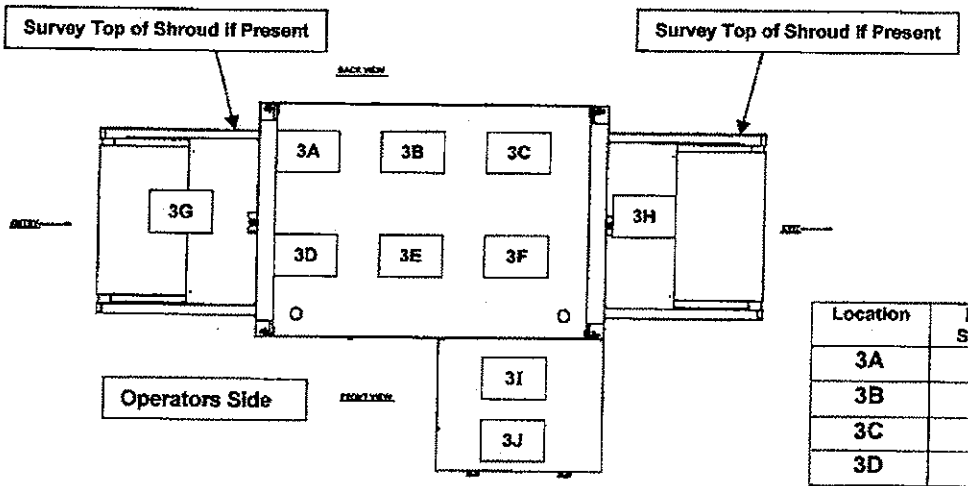
Location	Results NO Scatter Body	Results WITH Scatter Body
1A	25uR	27uR
1B	10uR	13uR
1C	15uR	15uR
1D	24uR	22uR
1E	11uR	15uR
1F	8uR	9uR
1G	15uR	16uR
1H	13uR	11uR
1I	4uR	4uR
1J	27uR	29uR
1K	31uR	41uR

FIELD SERVICE ENGINEERS RADIATION EMISSION SURVEY



Non-Operators Side

Location	Results NO Scatter Body	Results WITH Scatter Body
2A	15uR	17uR
2B	6uR	11uR
2C	8uR	13uR
2D	11uR	14uR
2E	7uR	12uR
2F	16uR	15uR
2G	5uR	11uR
2H	10uR	13uR
2I	7uR	12uR
2J	22uR	24uR
2K	27uR	35uR



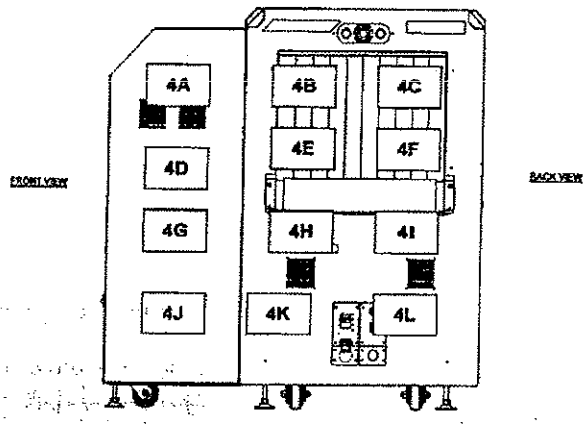
Top View

Location	Results NO Scatter Body	Results WITH Scatter Body
3A	20uR	21uR
3B	14uR	18uR
3C	17uR	20uR
3D	14uR	15uR
3E	13uR	17uR
3F	12uR	12uR
3G	39uR	36uR
3H	42uR	49uR
3I	5uR	5uR
3J	6uR	8uR

Rapiscan systems	MODEL 620DV OR 500 SERIES EQUIVALENT RADIATION LEAKAGE SURVEY FORM	MODEL 620DV FSE SURVEY FORM	FORM FSE-R-0047-620DV-1

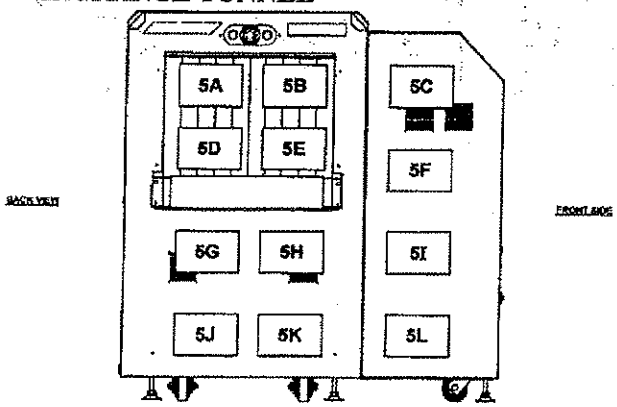
FIELD SERVICE ENGINEERS RADIATION EMISSION SURVEY

EXIT TUNNEL



Location	Results NO Scatter Body	Results WITH Scatter Body
4A	5uR	4uR
4B	31uR	37uR
4C	20uR	25uR
4D	4uR	9uR
4E	34uR	40uR
4F	31uR	29uR
4G	2uR	6uR
4H	13uR	11uR
4I	10uR	14uR
4J	5uR	7uR
4K	13uR	6uR
4L	9uR	12uR

ENTRANCE TUNNEL



Location	Results NO Scatter Body	Results WITH Scatter Body
5A	36uR	35uR
5B	32uR	42uR
5C	2uR	5uR
5D	53uR	57uR
5E	39uR	46uR
5F	6uR	6uR
5G	11uR	15uR
5H	14uR	18uR
5I	1uR	4uR
5J	12uR	13uR
5K	11uR	10uR
5L	5uR	7uR

Instructions:

- If shrouds are NOT installed, radiation measurements shall be taken 5 cm from the lead drapes.
- If shrouds are installed, radiation measurements shall be taken at the imaginary plane of the shroud opening.
- Lead Drapes should touch the conveyor. If they do not, check to verify x-ray radiation is not traveling down the conveyor where the gap exists between the lead drapes and the conveyor surface.
- Survey below the conveyor up against the cabinet near any gaps, mating surfaces, and photo sensor cut-outs.

SURVEY PERFORMED BY: [redacted] DATE: 4/6/10