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| Rapiscan systems An OSI Systems Company | | BAGGAGE/PARCEL CABINET X-RAY SYSTEM RADIATION LEAKAGE REPORT | | FIELD SERVICE ENGINEERS | | Form R-0588-3 9/9/09 | |
| 1. Name of Facility Seatac International Airport | | 2. Region WA | | 3. Street Address 17801 International Blvd | | | |
| 4. City Seattle | | 5. State or Province Code WA | | 6. Zip Code 98158 | | 7. Room No. or Other Physical Location of System | |
| 8. Person Interviewed | | 9. Telephone Number | | 10. Fax Number | | | |
| 11. Manufacture Information & Certification Label Present <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | 12. Radiation Measuring Instrument: FSE Shall Attach Copy of Calibration Certificate to This Form Model: 451P-RYR Serial No. 0428 Calibration Due Date: 11-19-2011 | | | | | |
| Manufacturer: Rapiscan Systems Inc. | | 13. System Model No. 620DV | | 14. Single Source <input type="checkbox"/> Other <input type="checkbox"/> Describe: Dual Source <input checked="" type="checkbox"/> | | 15. System Serial No. 7084401 | |
| 16. Date of Manufacture Mo. 10 Yr. 2008 | | 18. Facility Owner Has been notified of responsibility for "Application for Registration" with their State Radiation Control Agency <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| 17. X-ray Tube Serial Number(s) T08-40-84 / T08-31-25 | | 20. Operator Instructions Available <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | 21. Maintenance Schedule Available <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | | |
| 22. Warning Label Present at Controls Stating: "Caution: X-Rays Produced When Energized" <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> 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" <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | 24. Two Indicators Labeled "X-Ray On" Present at Controls (including software user interface) <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | | |
| 25. At Least One Indicator, Marked "X-Ray On" is Visible from Each Port <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | 26. Captured Key; The Key for the Key Actuated Control Cannot be Removed in Any Mode that Allows X-Ray Generation <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | | | | |
| 27. All Doors and Access Panels To the X-Ray Beam Prevent Generation of X-Radiation <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | 28. Some Part of the Body Can Be Inserted Through a Port Into The Primary Beam <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | | | |
| 29. Use of X-Ray Control Necessary to Resume Operation Following Interruption <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | 30. Means Provided to Ensure Operator Presence at the Control Area X-ray located in a public access area <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail Or X-ray located in a non-public access area <input type="checkbox"/> Not Required | | | | | |
| Rapiscan Systems Test Procedure Used: Rapiscan Systems WI-0023-4 | | 31. Scatter Block Description: <input type="checkbox"/> Two (2) Reams Copy Paper <input checked="" type="checkbox"/> Other, Describe: Pelicon 1400 | | 32. Means Provided to Operator for Terminating Exposures of Greater than One-Half Second and Preventing X-rays (E-Stop Test) <input checked="" type="checkbox"/> Yes - Pass <input type="checkbox"/> No - Fail | | | |
| 33. X-Ray Generator Settings 100.0 kVp 1.00 mA 16.8 1.007 | | 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: 2 uR/hr | | - Dosage per 155 Rectifier 4.4 | | 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 <i>Please see model specific diagram (attached)</i> | | | | | | | |
| 36. Overall Condition of Lead Drapes: <input checked="" type="checkbox"/> SAT - Pass <input type="checkbox"/> UNSAT - Fail Description | | 37. Overall Condition of Machine: <input checked="" type="checkbox"/> SAT - Pass <input type="checkbox"/> UNSAT - Fail | | 38. Comments, Corrective Active Actions and/or Recommendations: | | | |
| [Redacted] | | 40. Surveyor Signature [Redacted] | | 41. Date of Survey 3-4-11 | | 42. Time of Survey: 12:00 | |
| 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] Date 3/4/11 | | | | | |

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.

NO 357 7813
EQ 58435
MOVE
SEA

WO 3719800
RIS ADHOC

WO 373 5738
SEMI PM

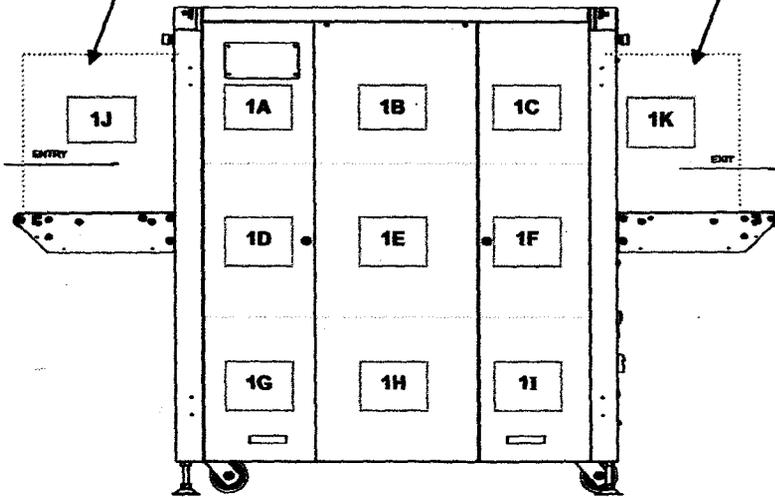
FIELD SERVICE ENGINEERS RADIATION EMISSION SURVEY

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: <u>3-4-11</u> | Location Manufactured: (Check One) Malaysia <input type="checkbox"/> UK <input type="checkbox"/> US <input checked="" type="checkbox"/> | Instrument Model No: <u>451P-R4R</u> |
| Time: <u>11:15</u> | Date of Mfg: <u>10-2008</u> | Instrument Serial No: <u>0428</u> |
| Background: <u>2</u> uSv/hr (2 uR/hr) | Serial No: <u>7084401</u> | Instrument Calibration Due: <u>11-19-11</u> |
| All Measurements Recorded In: <input type="checkbox"/> uSv/hr <input checked="" type="checkbox"/> uR/hr (Check One) | Settings: <u>160.8 kvP 1.00 mA</u> Settings: <u>160.8 kvP 1.00 mA</u> | Description of Scatter Body: (Check One) <input type="checkbox"/> Paper (2 Reams, 500 sheets each) <input type="checkbox"/> Wood Block (4" x 4" x 12" L) <input checked="" type="checkbox"/> Other <u>Pelican 1400</u> |

Survey Side of Shroud if Present

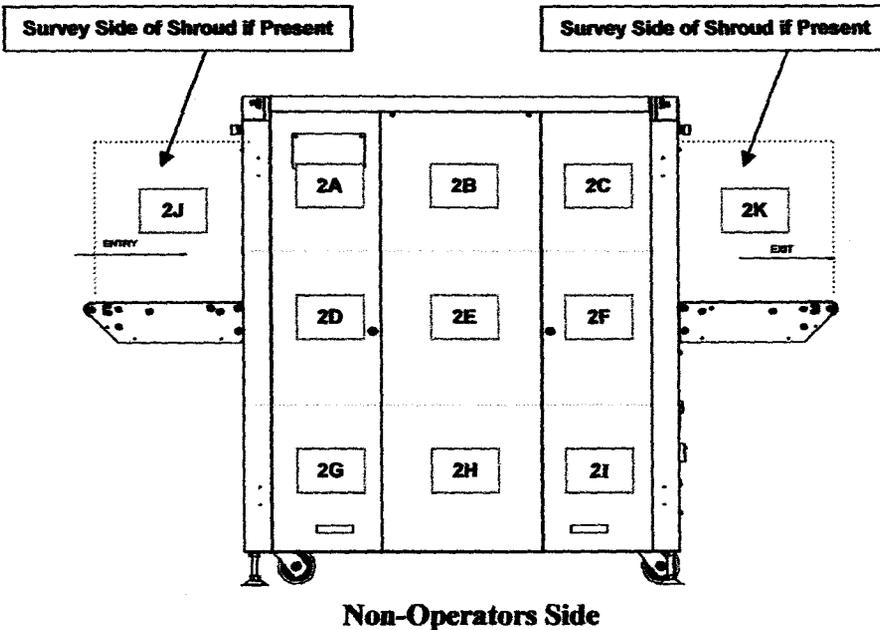
Survey Side of Shroud if Present



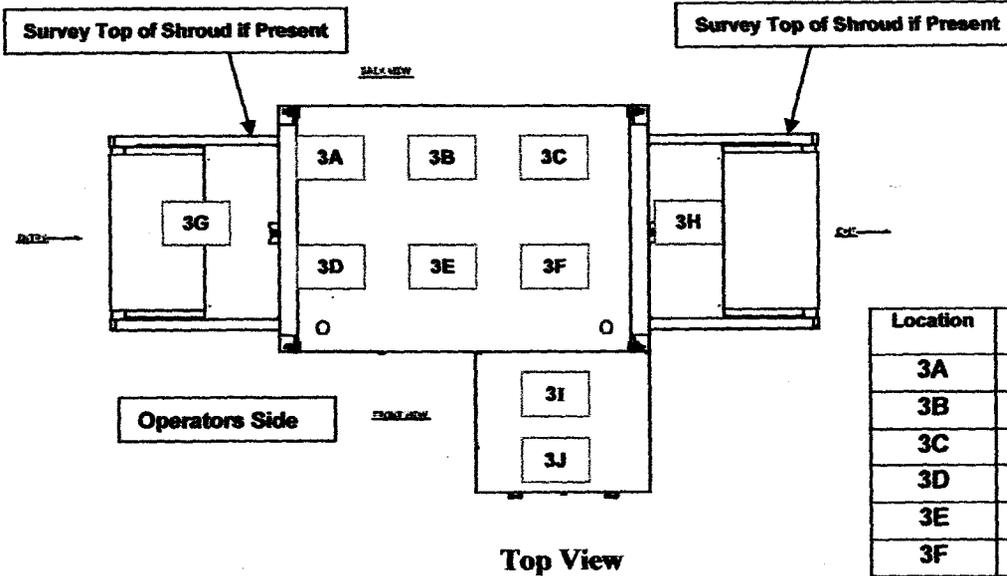
Operators Side

| Location | Results NO Scatter Body | Results WITH Scatter Body |
|----------|-------------------------|---------------------------|
| 1A | 3 | 7 |
| 1B | 14 | 12 |
| 1C | 18 | 10 |
| 1D | 4 | 3 |
| 1E | 2 | 10 |
| 1F | 2 | 4 |
| 1G | 13 | 3 |
| 1H | 6 | 3 |
| 1I | 5 | 3 |
| 1J | 41 | 83 |
| 1K | 49 | 62 |

FIELD SERVICE ENGINEERS RADIATION EMISSION SURVEY



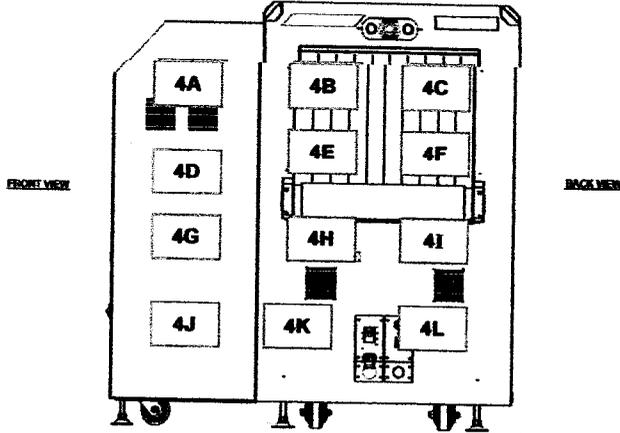
| Location | Results NO Scatter Body | Results WITH Scatter Body |
|----------|-------------------------|---------------------------|
| 2A | 3 | 17 |
| 2B | 15 | 19 |
| 2C | 4 | 4 |
| 2D | 18 | 7 |
| 2E | 10 | 14 |
| 2F | 7 | 7 |
| 2G | 2 | 4 |
| 2H | 3 | 3 |
| 2I | 2 | 0 |
| 2J | 13 | 29 |
| 2K | 44 | 41 |



| Location | Results NO Scatter Body | Results WITH Scatter Body |
|----------|-------------------------|---------------------------|
| 3A | 15 | 11 |
| 3B | 10 | 20 |
| 3C | 13 | 8 |
| 3D | 12 | 15 |
| 3E | 17 | 11 |
| 3F | 3 | 14 |
| 3G | 37 | 72 |
| 3H | 22 | 40 |
| 3I | 22 | 10 |
| 3J | 3 | 4 |

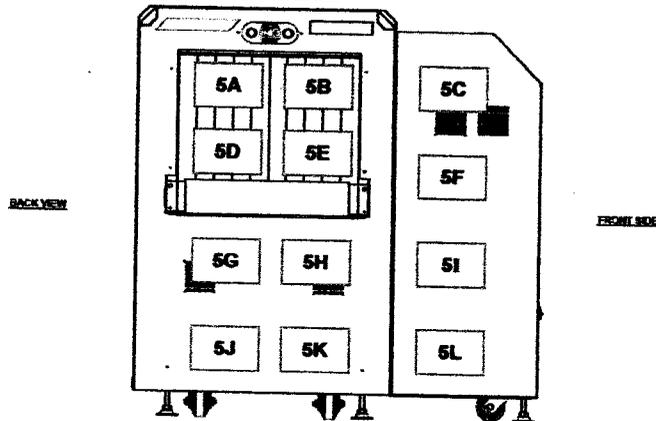
FIELD SERVICE ENGINEERS RADIATION EMISSION SURVEY

EXIT TUNNEL



| Location | Results NO Scatter Body | Results WITH Scatter Body |
|----------|-------------------------|---------------------------|
| 4A | 7 | 23 |
| 4B | 56 | 35 |
| 4C | 69 | 51 |
| 4D | 20 | 27 |
| 4E | 18 | 28 |
| 4F | 15 | 9 |
| 4G | 10 | 12 |
| 4H | 17 | 19 |
| 4I | 15 | 3 |
| 4J | 3 | 3 |
| 4K | 6 | 6 |
| 4L | 3 | 3 |

ENTRANCE TUNNEL



| Location | Results NO Scatter Body | Results WITH Scatter Body |
|----------|-------------------------|---------------------------|
| 5A | 23 | 36 |
| 5B | 15 | 30 |
| 5C | 19 | 12 |
| 5D | 18 | 34 |
| 5E | 20 | 29 |
| 5F | 13 | 20 |
| 5G | 14 | 16 |
| 5H | 3 | 21 |
| 5I | 12 | 11 |
| 5J | 13 | 17 |
| 5K | 6 | 2 |
| 5L | 6 | 3 |

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 [redacted] gaps, mating surfaces, and photo sensor cut-outs.

SURVEY PERFORMED BY: _____

DATE: 3-4-11