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Smiths Detection

Field Radiation Survey Sheet

SECTION	PART I - GENERAL PROCEDURE INFORMATION				
A "PRE-TEST INFORMATION"	NAME AND ADDRESS OF FACILITY OR AIRPORT AND SPECIFIC LOCATION OF X-RAY SYSTEM				
	NAME OF FACILITY	MIAMI INTERNATIONAL AIRPORT			
		Is this Facility Operated Exclusively by the Federal Government?			☐ YES ☐ NO ☑ UNKNOWN
	ADDRESS (Street No., Rural Rt., or Airline and Airport)	4200 NW 21ST STREET			
	CITY	MIAMI	STATE	FL	ZIP CODE 33122
	ROOM NO. or OTHER LOCATION	CENTRAL	CONTACT PERSON	[redacted]	
	PHONE NO.	[redacted]	FAX NO.		
	MANUFACTURER	SMITHS DETECTION	MODEL NO.	HS 6040	
	DATE OF MFR.	APRIL 2008	SERIAL NO.	78171	
	MFR. CERTIFICATION LABEL ATTACHED	☑ YES ☐ NO			
B "CABINET X-RAY CLASSIFICATION"	CLASSIFICATION OF CABINET X-RAY SYSTEM				
	☑ Baggage Inspection	☐ Special Purpose	☐ General Purpose	☐ Other	
				Describe Other:	
C "POSTINGS & INSTRUCTIONS"	POSTING & INSTRUCTION VERIFICATION (Not Applicable for Facilities Operated Exclusively by the Federal Government)				
	☐ State "Notice to Employees" Document Posted		☐ Operators Instruction Manual on Location		☐ N/A ☑ UNKNOWN
	☐ Certificate of X-ray Machine Registration on Location		☐ Cabinet X-Ray Machine Maintenance Schedule Available		
D "WARNING LIGHTS & INDICATORS"	WARNING LIGHTS & INDICATOR VERIFICATION				
	Warning Label Present at Controls Stating: "Caution: X-Rays Produced When Energized"				☑ YES ☐ NO
	Warning Labels Present at Ports Stating "Caution: Do Not Insert Any Part of the Body When System is Energized, X-Ray Hazard"				☑ YES ☐ NO
	Two Indicators Labeled "X-Ray ON" Present at Controls				☑ YES ☐ NO
	At Least One Indicator, Marked "X-Ray ON", is Visible from Each Port, Door, and Access Panel				☑ YES ☐ NO
E "INTERLOCKS"	INTERLOCK VERIFICATION TEST				
	The Key for the Key Actuated Control Cannot be removed in Any Mode that Allows X-Ray Generation				☑ YES ☐ NO
	All Doors and Access Panels that were Tested Prevent Generation of X-Rays				☐ YES ☐ NO ☑ N/A
	The Use of the ON Control is Necessary to Resume Operation of X-Rays Following Interruption of X-Ray Generation				☑ YES ☐ NO
F "PORTS AND APERTURES"	ACCESS TO PORTS AND APERTURES				
	Some Part of the Body Can Be Inserted Through A "Port" Into the Primary Beam				☐ YES ☑ NO
	Some Part of the Body Can Be Inserted Through An "Aperture"				☐ YES ☑ NO ☐ N/A
G "BAGGAGE INSPECTION UNITS"	BAGGAGE INSPECTION UNIT CHECKS ONLY				
	Means Provided to Ensure Operator Presence at the Control Area which Permits Surveillance of All Ports and Doors During X-Ray Generation				☑ YES ☐ NO
	Means Provided to the Operator for Terminating Exposures of Greater Than One-Half Second and Preventing Additional Exposures of Less Than One-Half Second				☑ YES ☐ NO

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[redacted]

[redacted]

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Field Radiation Survey Sheet

SECTION	PART II - SPECIFIC PROCEDURE INFORMATION
H "LEAKAGE RADIATION"	LEAKAGE RADIATION - SPECIFIC TEST PROCEDURE # 01

Scattering Body Description: ☐ Lucite ☐ Paper ☑ Other

Describe Other: PELICAN CASE

X-Ray Machine Settings	kV	83.32	Background
	mA	494.42	8 uR/hr
Radiation Survey Instrument Used	Make/Model Number	INVERSION 451-P	
	Serial Number	00496	
	Calibration Date Due	10/11/2011	

Survey Location Description	Survey Point	External Surface Exposure Rates (uR/hr)		Internal Exposure (mR) "Optional"		Comments
	1	12	uR/hr		mR	
	2	11	uR/hr		mR	
	3	13	uR/hr		mR	
	4	29	uR/hr		mR	
	5	26	uR/hr		mR	
	6	21	uR/hr		mR	
	7	12	uR/hr		mR	
	8	11	uR/hr		mR	
	9	13	uR/hr		mR	
	10	10	uR/hr		mR	
	11	11	uR/hr		mR	
	12	13	uR/hr		mR	
	13	12	uR/hr		mR	

Highest External Surface Exposure Rate Reading: 29 uR/hr — Location Description: Pos # 4

All External Surface Exposure Rate Readings Are Less Than 500 uR/hr (0.5 mR/hr) IAW 21 CFR 1020.40: ☑ YES ☐ NO

I "ADDITIONAL INFORMATION"	ADDITIONAL INFORMATION			
	Overall Condition of Cabinet X-Ray Unit	☑ SAT	☐ UNSAT *	* Describe UNSAT Condition
	Condition of Lead Curtains	☑ SAT	☐ UNSAT *	* Describe UNSAT Condition

Other Comments, Recommendations, Corrections, or Problems Encountered

	A	B	C	D
X Htr. off	466.96 mA	471.53	434.91	476.11
X. Htr on	494.42 mA	489.85	457.80	503.58
Anode Cur.	709.59 μA	606.20	659.23	714.11
H. Tension	83.32 kV	79.66	78.74	83.32

7.4 mRem / 10 passes

= 0.74 mRem per Dose

SURVEYOR'S NAME (Print: Last, First, Middle Int.	[redacted]
SURVEYOR'S SIGNATURE	[redacted]
DATE OF SURVEY AND INSPECTION	3/12/2011

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[redacted]

aTiX Semi-Annual
Preventive Maintenance Checklist

Technician [redacted]

Unit Serial Number 78171

Unit Location MIA

Work Order Numbe[redacted]

Safety check carried out	☑
Unit housing checked	☑
Unit cleaned (outside & inside)	☑
Light barriers cleaned & checked	☑
Operating elements checked	☑
PE wiring checked	☑
Supply voltage checked	☑
Emergency stop switches checked	☑
Interlock system checked	☑
Conveyor belt checked & cleaned	☑
Safety rollers at input & output checked	☑
Non-motorized roller conveyors checked	☑
Motors checked	☑
UPS checked and serviced	☑
Tracking of conveyor belts checked	☑
Fans checked & filters cleaned/changed	☑
Unit configuration checked	☑
Review error log & take appropriate action	☑
Check calibration & shutter units	☑
Monitor settings checked	☑
Download FDRS data	☐
Diagnosis report made up	☐

Generator controls checked

Generator	A	B	C	D	
X-rays off:					
Heater current	466.96	471.53	434.91	476.11	mA
X-rays on:					
Heater current	494.42	489.85	457.80	503.58	mA
Anode current	707.54	666.70	654.23	714.17	µA
High tension	83.32	79.66	78.74	83.32	kV
Internal dose Σ	0.74				mRem

Alignment of X-ray beams checked	☑
Line signals & detector modules checked	☑
Perform calibration	
Detectors	☑
Geometric	☑
Material Detection (Self Cal.)	☑
Test material detection	☐
Functional test carried out	
Score from sheet 40 Minimum score 33	
Perform radiation survey	☑

Software version: HX-03-08-K-180-09

This unit is serviceable and ready for use: yes ☒ no ☐

Remarks Unit in Good working Condition -

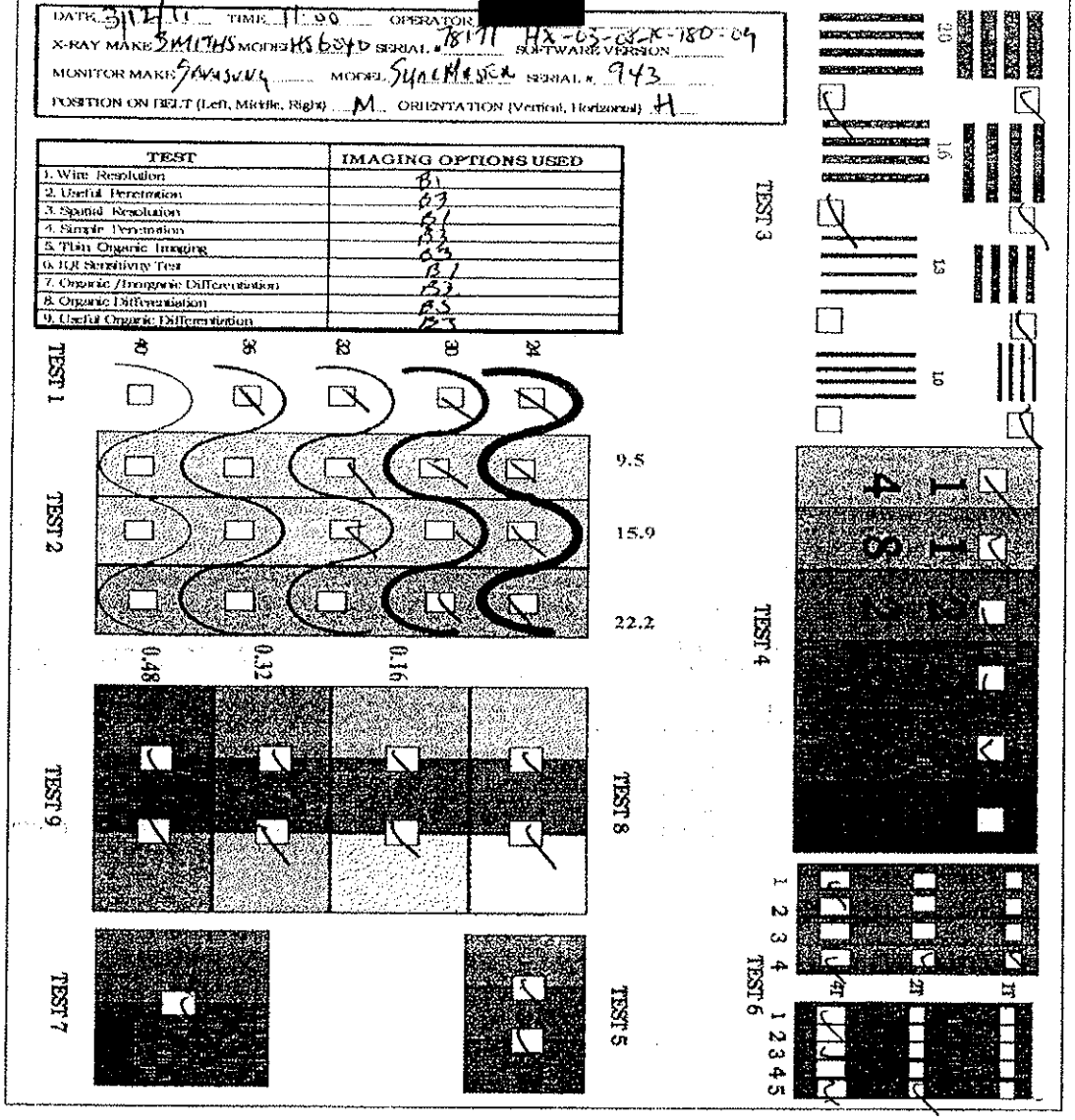
Date 3/12/11

Signature of technician [redacted]

[redacted]

DOEO-0220, Rev. 6

[redacted]



ASTM X-RAY TEST OBJECT LOG SHEET

DATE 3/12/11 TIME 11:00 OPERATOR [redacted]

X-RAY MAKE SMITHS MODEL HS 604D SERIAL # 78171 SOFTWARE VERSION HX-03-08-K-180-04

MONITOR MAKE SAMSUNG MODEL SYNCMASTER SERIAL # 943

POSITION ON BELT (Left, Middle, Right) M ORIENTATION (Vertical, Horizontal) H

TEST	IMAGING OPTIONS USED
1. Wire Resolution	B1
2. Useful Penetration	B3
3. Spatial Resolution	B1
4. Simple Penetration	B3
5. Thin Organic Imaging	B3
6. IQI Sensitivity Test	B1
7. Organic /Inorganic Differentiation	B3
8. Organic Differentiation	B3
9. Useful Organic Differentiation	B3

ASTM Test #	1	2	3	4	5	6	7	8	9a	9b	9c	Total
Min. Acceptable Score	4	5	6	3	2	8	1	2	1	1	0	33
Score	4	7	6	5	2	8	1	2	2	2	2	40

[redacted]

[redacted]

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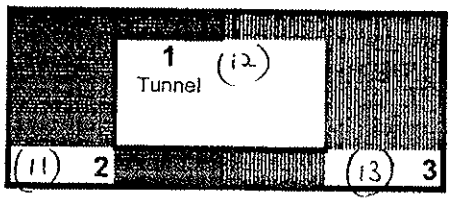
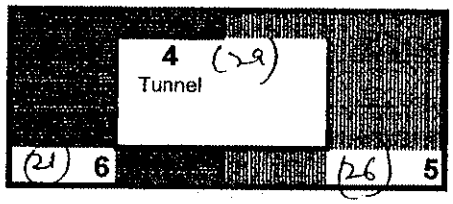
Smiths Detection

Field Radiation Survey Sheet

Pax
Side
Ent.



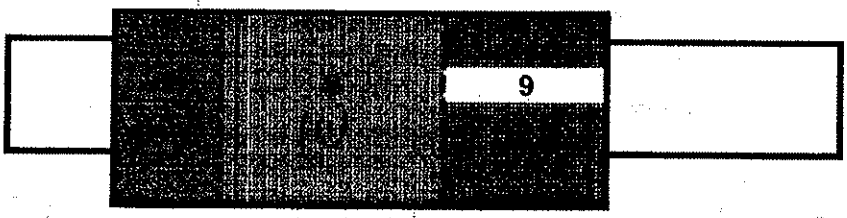
End View



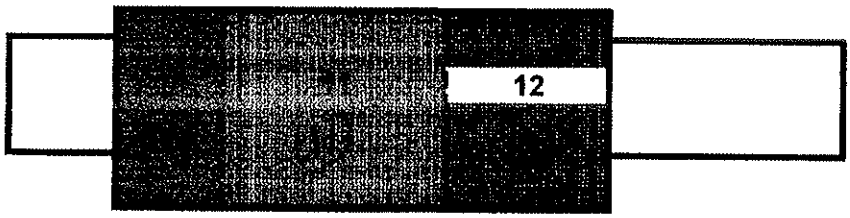
Pax
Side
Exit

End View

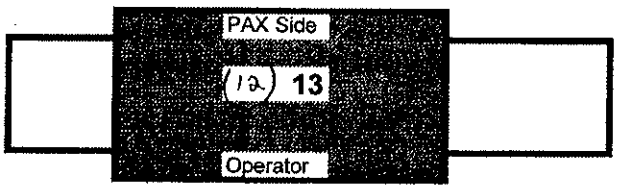
Entire Area around each number must be surveyed for leakage



Operator Side View



PAX Side View



Top View

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