

# RADIATION SURVEY WORKSHEET

## eXaminer Radiation Survey Information

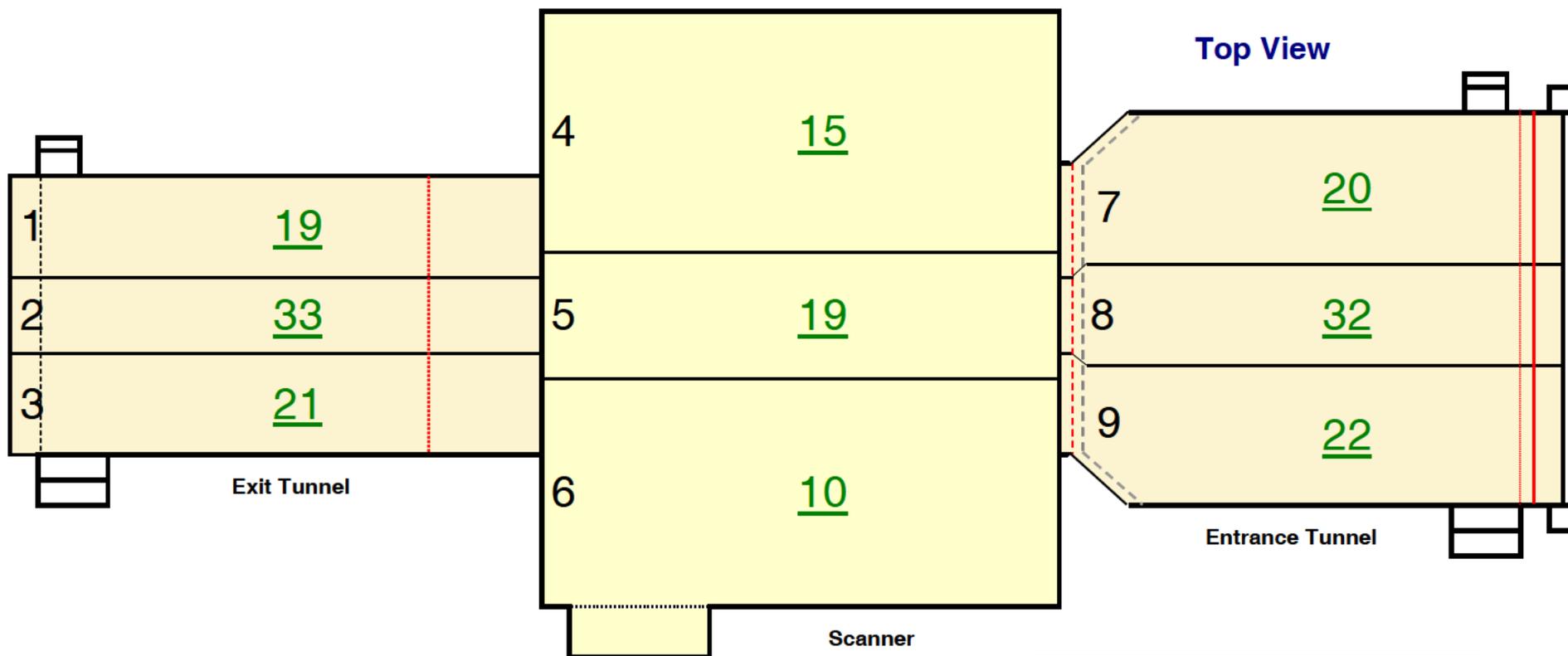
Airport: <b>SJU</b>	Scanner Location: <b>Cruiseline</b>	Case#: <b>360540</b>
Personnel Performing Radiation Survey:		Date Survey Performed: <b>3/29/2011</b>
Scanner Serial Number: <b>6481</b>	Entrance Tunnel Serial Number: <b>5214A</b>	Exit Tunnel Serial Number: <b>5214B</b>
High Reading: <b>19</b>	Average Reading: <b>11.05</b>	Min. Reading: <b>2</b>
High Reading: <b>83</b>	Average Reading: <b>30.76</b>	Min. Reading: <b>12</b>
High Reading: <b>68</b>	Average Reading: <b>23.81</b>	Min. Reading: <b>7</b>
<b>Good</b>	<b>Good</b>	<b>Good</b>
Radiation Meter: Type Meter: <b>451P</b>	Meter Serial Number: <b>96</b>	Calibration Due Date: <b>October 27, 2011</b>

NOTES

<b>Complete Radiation Survey (CRS)</b>	<b>Record Voltage and Bean Current here:</b>							
<b>Rename this Document before starting the Survey to:</b>	<b>Voltage:</b> <b>164</b> KV   <b>Beam Current:</b> <b>9.8</b> mA							
<b>360-CRS-29MAR2011-6481</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Maximum Safe Readings</b></td> <td style="text-align: center;"><b>Scanner</b></td> <td style="text-align: center;">350</td> <td style="text-align: center;"><b>Tunnels</b></td> <td style="text-align: center;">350</td> <td style="text-align: center;"><b>Curtains</b></td> <td style="text-align: center;">350</td> </tr> </table>	<b>Maximum Safe Readings</b>	<b>Scanner</b>	350	<b>Tunnels</b>	350	<b>Curtains</b>	350
<b>Maximum Safe Readings</b>	<b>Scanner</b>	350	<b>Tunnels</b>	350	<b>Curtains</b>	350		

Step:	Procedure	Expected results
	Set Up: Obtain Inovision Ion Chamber Survey Meter and in an area away from the scanners, turn on the meter by pressing the On-Off key. Wait approx. 4 minutes for the meter to run through the initialization procedure.	The GUI will be visible and will indicate Standby. After the radiation meter initialization procedure is complete the meter will be reading less than 20 $\mu$ R/hr and the meter will be ready for use.
2.	The scanner will be in Standby. Change the conveyor switch on the scanner to Stop. Change the exit tunnel conveyor switch to Off to stop the conveyor.	Both conveyors should be stopped.
3.	On the GUI dropdown screen, select diagnostic, followed by Radiation Survey. A radiation survey window will appear. Click "Turn On" button to turn x-rays on. Turn on x-rays prompt will say "Place survey bag on belt". Place IQTK bag on Entry Conveyor Belt.	A window indicating "Radiation Survey" will appear.
4.	When "Bag in survey position" appears, go to the FCC monitor and select "2" then <Enter>, verify and record the voltage and current in the displayed on the FCC screen in the planks provided above.	The high voltage is between <b>144KV</b> and <b>176KV</b> . The current is between <b>8.8mA</b> and <b>10.6mA</b> and the scanner X-ray indicator lights are on.
5.	Survey one of the areas indicated by the boxes in Appendix A2. Record the highest reading within the area. Repeat the process until all areas are surveyed and readings are recorded.	As the survey is conducted, the radiation meter indicates the degree of radiation emission.
6.	Review all radiation data sheets for high readings.	Readings shall not exceed 350 uR/hr in any box.
7.	After radiation survey is complete, click on "Start Conveyor" button on the GUI. Click the "Turn Off" button to turn off x-rays. Next click "Done". The IQTK bag will eject from exit tunnel. EDAC will reboot.	IQTK bag is ejected and scanner reboots.
7.	Visually inspect the entrance and exit of the system for X-ray caution hazard signs.	X-ray hazard signs reading "Do not insert any part of the body when system is energized" are posted at entrance and exit of system.
9.	Fill out the eXaminer radiation sticker and adhere to to the frame of the eXaminer Surveyor #5 on the left side of the scanner.	Readings shall not exceed 350 uR/hr in any box.

# RADIATION SURVEY WORKSHEET

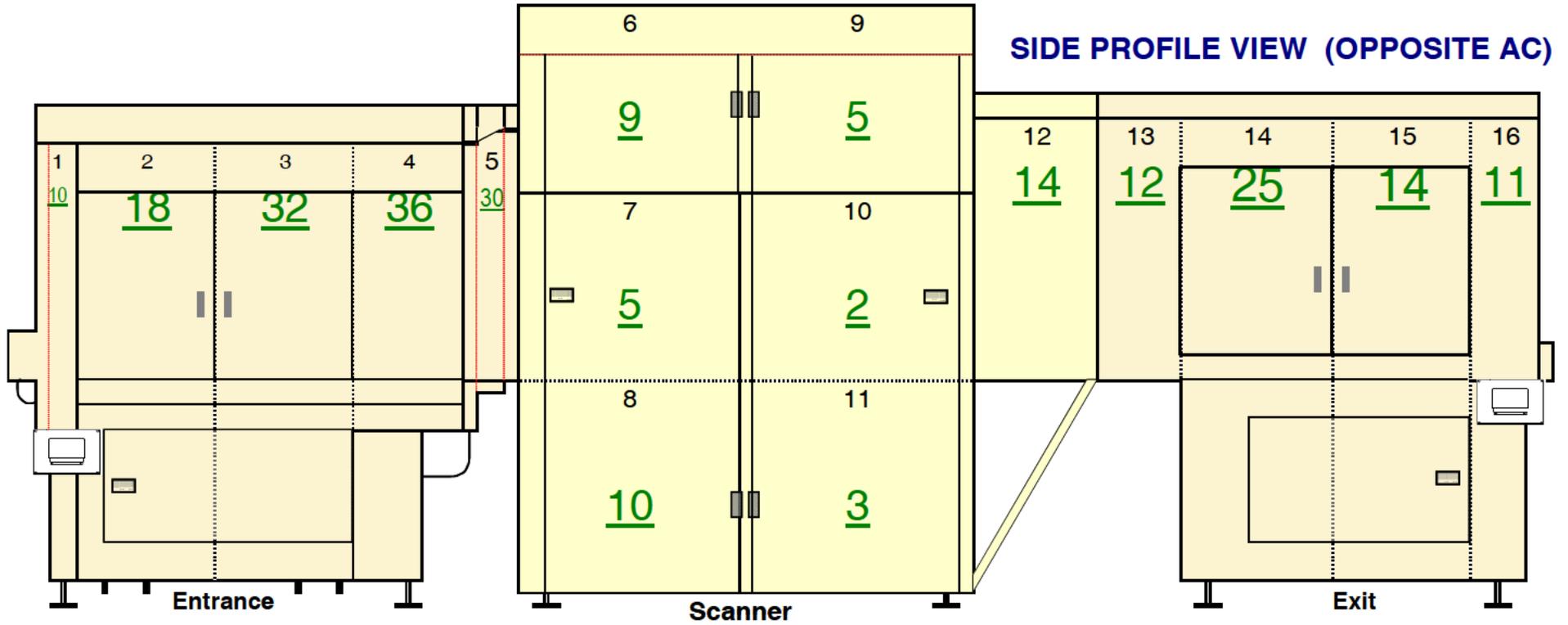


GOOD

Top View			
Scattered Radiation Measurement Points Worksheet			No PROBLEM
Record highest reading per panel		μR/Hr	
1	Exit Conveyor Top Panel	19	
2	Exit Conveyor Top Panel	33	
3	Exit Conveyor Top Panel	21	
4	Scanner Conveyor Top Panel	15	
5	Scanner Conveyor Top Panel	19	
6	Scanner Conveyor Top Panel	10	
7	Entrance Conveyor Top Panel	20	
8	Entrance Conveyor Top Panel	32	
9	Entrance Conveyor Top Panel	22	

Highest Reading	33
Average Reading	21
Lowest Reading	10

# RADIATION SURVEY WORKSHEET

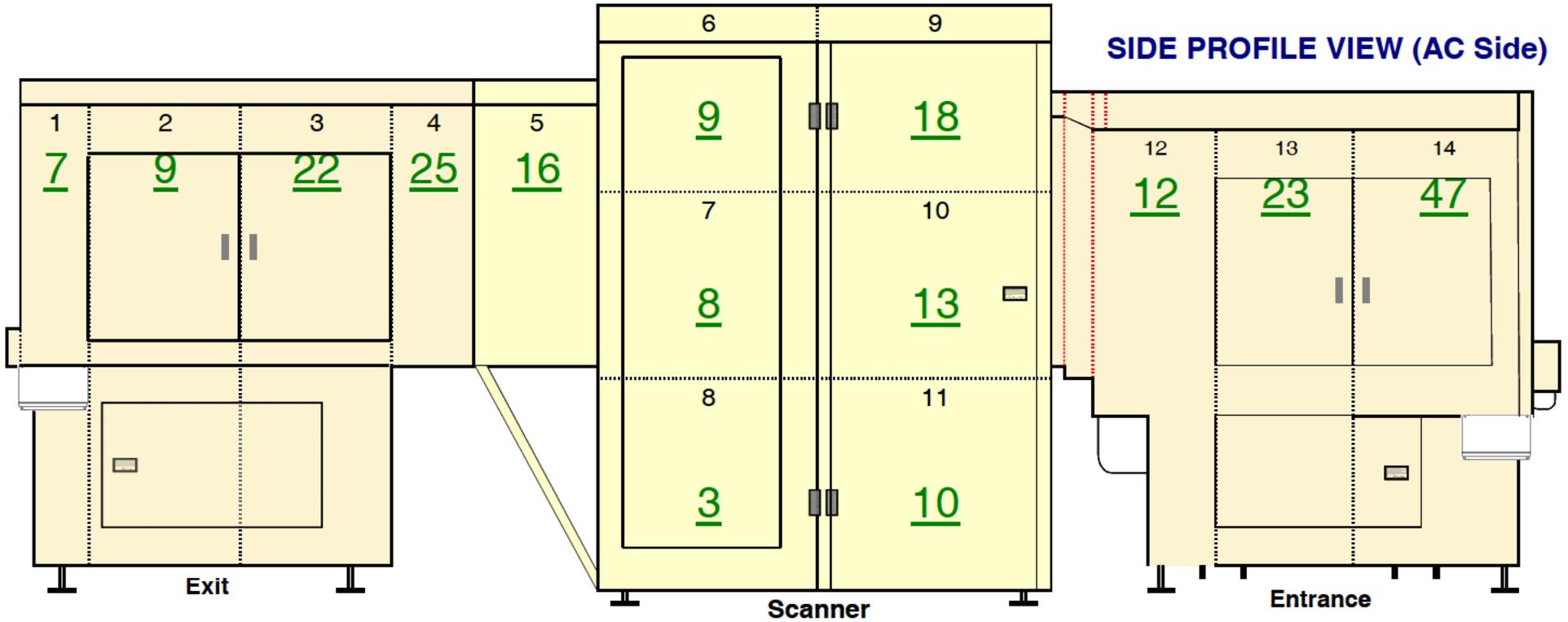


SYSTEM - SIDE PROFILE VIEW (Opposite AC Side)		
Scattered Radiation Measurement Points Worksheet		
Record highest reading per panel		μR/Hr
1	Entrance Conveyor Panel	10
2	Entrance Conveyor Panel	18
3	Entrance Conveyor Panel	32
4	Entrance Conveyor Panel	36
5	Entrance Conveyor / Scanner Panel	30
6	Upper Scanner Panel	9
7	Middle Scanner Panel	5
8	Lower Scanner Panel	10
9	Upper Scanner Panel	5
10	Middle Scanner Panel	2
11	Lower Scanner Panel	3
12	Exit Conveyor / Scanner Panel	14
13	Exit Conveyor Panel	12
14	Exit Conveyor Panel	25
15	Exit Conveyor Panel	14
16	Exit Conveyor Panel	11

GOOD

Highest Reading	36
Average Reading	15
Low Reading	2

# RADIATION SURVEY WORKSHEET



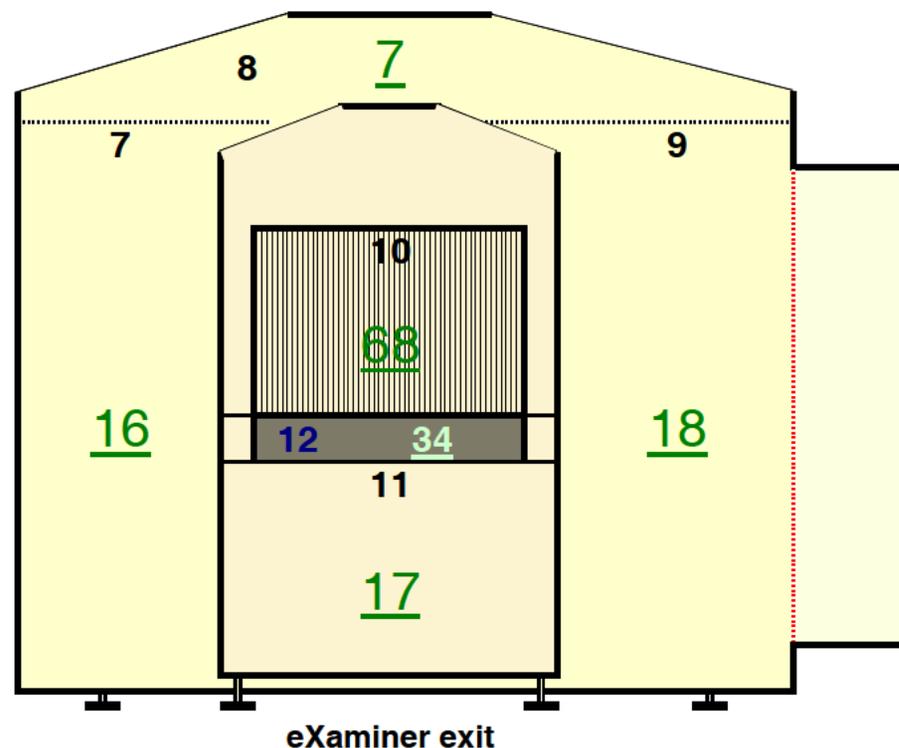
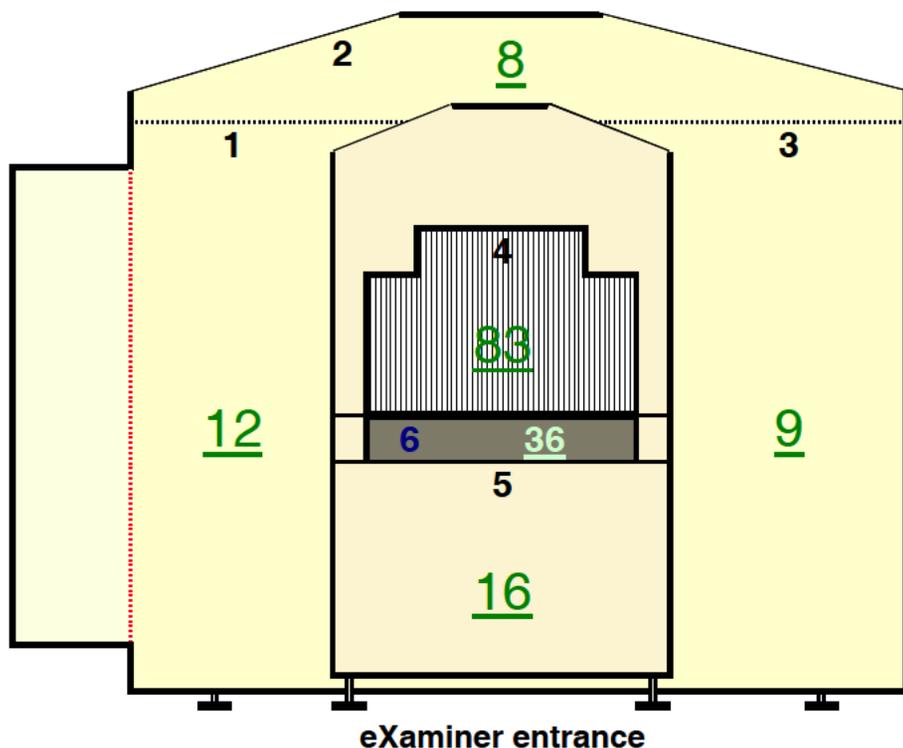
SYSTEM - SIDE PROFILE VIEW ( AC Side)		
Scattered Radiation Measurement Points Worksheet		
Record highest reading per panel		μR/Hr
1	Exit Conveyor Panel	7
2	Exit Conveyor Panel	9
3	Exit Conveyor Panel	22
4	Exit Conveyor Panel	25
5	Exit Conveyor / Scanner Panel	16
6	Upper Scanner Pane	9
7	Middle Scanner Panel	8
8	Lower Scanner Panel	3
9	Upper Scanner Panel	18
10	Middle Scanner Panel	13
11	Lower Scanner Panel	10
12	Entrance Conveyor / Scanner Panel	12
13	Entrance Conveyor Panel	23
14	Entrance Conveyor Panel	47

GOOD

Highest Reading	47
Average Reading	16
Low Reading	3

# RADIATION SURVEY WORKSHEET

## SYSTEM - FACES (End Views)



SYSTEM - FACES (End Views)			
Scattered Radiation Measurement Points Worksheet			No PROBLEM
Record highest reading per panel		μR/Hr	
1	Scanner Panel	12	
2	Scanner Top Panel	8	
3	Scanner Panel	9	
4	Belt Entrance	83	
5	Entrance Lower Panel	16	
6	Belt Lower Facia Cover Entrance	36	
7	Scanner Panel	16	
8	Scanner Top Panel	7	
9	Scanner Panel	18	
10	Belt Exit	68	
11	Exit Lower Panel	17	
12	Belt Lower Facia Cover Exit	34	

**GOOD**

Highest Reading	83
Average Reading	27
Low Reading	7