

## Vanta iX Radiation Profile

Date: November 17, 2020  
Performed by: Ernie Moseley, Project Manager Engineer  
Reviewed by: Michael Whalen, Regulatory Affairs & Radiation Safety Officer  
Survey Instrument: Ludlum model 2241 (S/N 289346) with probe model 44-3 (S/N PR326341)

DocuSigned by:  
*Michael Whalen*  
9563CA914E014AD...

The two tables below represent the upper bounds on the worst case - maximum power and minimum beam filtration - using a 316 stainless steel target. More specifically, the Vanta iX was operating at either 40 kV, 100 uA w/2 mm Al filter (model VIX-CW); or, 50 kV (model VIX-MR), 80 uA, 350 um Cu filter. Appendix A contains diagram where the measurements were taken from. Note, these beam conditions do not represent typical use values or a combination of settings typically available from the factory.

Maximum Leakage Radiation Measured at 40 kV in  $\mu\text{Sv/h}$

Surveyed Location	Close	10 cm	30 cm
Front	BK	BK	BK
Left Side (front of scatter plane)	24.0	4.8	1.2
Right Side (front of scatter plane)	11.1	1.9	BK
Top (up to front cover seam)	16.7	2.9	1.1
Left Side (behind scatter plane)	BK	BK	BK
Right Side (behind scatter plane)	BK	BK	BK
Top (rear up to scatter plane)	BK	BK	BK
Bottom	BK	BK	BK

Maximum Leakage Radiation Measured at 50 kV in  $\mu\text{Sv/h}$

Surveyed Location	Close	10 cm	30 cm
Front	22.8	7.4	2.6
Left Side (front of scatter plane)	14.3	2.0	BK
Right Side (front of scatter plane)	9.6	1.9	BK
Top (up to front cover seam)	27.6	2.8	1.2
Left Side (behind scatter plane)	BK	BK	BK
Right Side (behind scatter plane)	BK	BK	BK
Top (rear up to scatter plane)	BK	BK	BK
Bottom	BK	BK	BK

BK = background reading ( $< 1 \mu\text{Sv/h}$ )

To convert from  $\mu\text{Sv/h}$  to mR/h, divide value by 10.

Survey Last Updated: November 10, 2020

## Appendix A: Test Setup and Survey Locations

