

# Bureau of Radiation Protection Field Survey Summary

## Milton, PA

On May 21, 2025, health physicists from the Pennsylvania Department of Environmental Protection, Bureau of Radiation Protection (BRP), returned to a private residence in Milton, Pennsylvania to conduct additional radiological surveys. This is further action following a notification that radiation alarms had been triggered at local landfills. The source of the radiological material was traced to waste originating from the private residence.

The goal of this round of radiological surveys was to attempt to classify the outside property and further survey areas inside the residence.

### Surveys:

During the visit to the Milton residence, a comprehensive radiological survey was conducted of the exterior and interior areas. This included 80% comprehensive surveys of the bathroom, bedroom, bookshelf and wall lockbox, office bookshelf, kitchen, and surrounding rooms with a Ludlum Model 2221 paired with a 2x2 NaI probe. A Ludlum Model 2360 was used to record static measurements in areas registering the highest readings, along with LSC wipes at five locations. The outside of the residence was also surveyed using a Mirion SPIR-ACE Identifier. Background gamma readings ranged from approximately 7,000-8,000 CPM.

### Results:

There was no measurable contamination detected in the outside grounds. Results of the static surveys performed inside the residence and LSC wipes are presented in Table 1. The bedroom bookshelf and wall-mounted lockbox registered slightly higher gamma readings in the range of 8,000-10,000 CPM. Additional surveys of the desk, drawers, cabinet, and floor between the hallway and bedroom door were consistent with findings from the first visit. Wipes were collected from the desk, cabinet, and floor to test for removable contamination. Another empty bookshelf in the office measured approximately 8,000-9,000 CPM, and an additional wipe was taken there as well as from the exit sign stored in a bin in the office. Room dimensions recorded during the visit included the kitchen (16' x 12'), bedroom (14' x 12'), office (13' x 12'), basement storage (8' x 8'), and a cabinet area (3' x 6'). During general surveys of the kitchen using a Ludlum 2360 paired with a 43-93 alpha beta scintillator, two localized elevated areas were identified: one on the kitchen counter to the right of the sink measuring roughly 1.5' x 3', and another on the kitchen floor directly below the counter in the same area. These spots were not detected by the SPIRE-ACE or the Ludlum 2221. One-minute alpha counts at these locations ranged from approximately 300-500 CPM. Removable wipe samples were collected from both locations and later analyzed on a Ludlum 2929, with results indicating only background levels and no evidence of removable contamination. Instrument readings recorded were: Kitchen floor – Alpha 374 CPM, and Beta 1882 CPM; kitchen counter – Alpha 454 CPM, and Beta 567 CPM.

# Table 1

PADEP Bureau of Radiation Protection  
Surface Activity Survey Data

Location:	[REDACTED]		
Surveyor(s):	[REDACTED]	Date:	5/21/2025
		Time:	
Instrumentation:	Ludlum 2350 #3	Probe Area:	100 cm <sup>2</sup>
Ser. #'s Instrument	234833	Probe x 0.25 Surface Eff	244533
Efficiency: Alpha	0.13	x 0.5 Surface Eff	0.03
Beta	0.02		0.0104
Cal Date:	10/11/2024	Cal Due Date:	10/11/2025

Alpha Bkg.	20	counts
Bkg count time	10	min.
Alpha Bkg cpm	2.00	
Beta Bkg	1090	counts
Bkg count time	10	min.
Beta Bkg cpm	109	

Static Results:				Alpha			Beta			
Meas. #	Room	Detector	LSC wipe	Count Time (minutes)	Gross Counts	Net CPM	Activity (dpm/100cm <sup>2</sup> )	Gross Counts	Net CPM	Activity (dpm/100cm <sup>2</sup> )
1	Office Floor	3	NA	1	34	32	985	629	520	50,000
2	Office Bookshelf	3	yes	1	37	35	1,077	393	284	27,308
3	Kitchen Floor	3	NA*	1	374	372	11,446	1,882	1,773	170,481
4	Kitchen Counter	3	NA*	1	454	452	13,908	567	458	44,038

\*Took Removable Wipes on Kitchen Floor and Counter to count on our 2929

LSC Samples		pCi/sample c14	pCi/sample H3
1	Office Bookshelf	58.68	-3.54
2	Exit Sign	27.97	-5.31
3	Desk	1539.89	38.95
4	Cabinet	1530.57	58.43
5	Corner of Door	85.55	1.77