

BNL Static Magnetic Fields Exposure Form

Part A: Source Hazard Assessment Record

I. Source Identification				
Department: NSLS	Building: 727	Room or Area (location of source): Magnetic Measurements Laboratory		
Identifier/ Name of Source: Various magnets, in storage test, and assembly				
Status of Source Usage (check all that apply): <input checked="" type="checkbox"/> In use on frequent basis <input type="checkbox"/> Planned use in the near future <input type="checkbox"/> Possible future use <input type="checkbox"/> No planned use <input type="checkbox"/> Intermittent use <input type="checkbox"/> One-time use <input type="checkbox"/> Other:				
Check or Describe Use or Process: <input type="checkbox"/> Accelerator magnets <input type="checkbox"/> Nuclear Magnetic Resonance <input type="checkbox"/> Ion pumps <input checked="" type="checkbox"/> Beam transport magnet <input type="checkbox"/> Magnetic Resonance Imaging <input checked="" type="checkbox"/> Permanent magnet <input type="checkbox"/> Detector magnets <input type="checkbox"/> Medical device <input type="checkbox"/> Electromagnet lifting device <input type="checkbox"/> Super-conducting coils <input type="checkbox"/> Electron microscope <input type="checkbox"/> Tool Chuck/clamp <input type="checkbox"/> Other (specify):				
II. Exposure Summary [Complete Part B: Field Strength Measurement Record or attach documentation from manufacturer]				
Target Body Area	BNL Exposure Limits**			
	TWA-8		Ceiling	
	(mT)	(G)	(mT)	(G)
Cardiac Pacemaker & Ferromagnetic Objects*			0.5	5
Whole Body (Torso or Head)	60	600	2,000 (2 T)	20,000
Extremities (Limbs)	600	6,000	5,000 (5 T)	50,000
*Ferromagnetic Objects (Ceiling), including medical implants and prostheses, may be affected by fields. Additional evaluation is required.				
** TWA-8 = $(B_1 t_1 + B_2 t_2 + \dots + B_n t_n) / 480$ minutes (See Exhibit BNL Static Magnetic Field Exposure Limits for details.) B = Flux Density [mT] t = time of exposure [minutes]				
Maximum Exposure Potential surveyed applicable to worker exposure (mT): Extremities could be exposed to 1.3 T, whole body exposure could be > 60 mT				
III. Exposure Hazard Evaluation: Indicate worker exposure potential on the OMC Job Assessment Form or OMC Static Magnetic Field Questionnaire form.				
Flux Density				
1a. <input type="checkbox"/> Flux Density ≥ 0.5 mT (5 Gauss). No potential for individuals with medical electronic devices or ferromagnetic implants/prostheses* to be exposed above 0.5 mT (5 Gauss).				
1b. <input checked="" type="checkbox"/> Flux Density ≥ 0.5 mT (5 Gauss). Access to > 5G for individuals with medical electronic devices or ferromagnetic implants/prostheses* is not permitted.				
2a. <input checked="" type="checkbox"/> Flux Density ≥ 60 mT (600 Gauss) - Whole Body. No potential to exceed the 8 hours TWA.				
2b. <input type="checkbox"/> Flux Density ≥ 60 mT (600 Gauss) - Whole body. Potential to exceed the 8 hours TWA. Controls must be used.				
3a. <input type="checkbox"/> Flux Density ≥ 600 mT (6000 Gauss) - Limbs. No potential to exceed the 8 hours TWA.				
3b. <input type="checkbox"/> Flux Density ≥ 600 mT (6000 Gauss) - Limbs. Potential to exceed the 8 hours TWA. Controls must be used.				
4a. <input type="checkbox"/> Flux Density ≥ 2 T (ceiling) - Whole Body. No potential to exceed the BNL ceiling.				
4b. <input type="checkbox"/> Flux Density ≥ 2 T (ceiling) - Whole Body. Potential to exceed the BNL ceiling. Controls must be used.				
5a. <input type="checkbox"/> Flux Density ≥ 5 T (ceiling) - Limbs. No potential to exceed the BNL ceiling.				
5b. <input type="checkbox"/> Flux Density ≥ 5 T (ceiling) - Limbs. Potential to exceed the BNL ceiling. Controls must be used.				
* Medical electronic devices include cardiac pacemakers, electronic inner ear prostheses, and insulin pumps. Ferromagnetic implants/ prostheses include aneurysm clips, replacement hips.				

