Mucool Labyrinths and Penetrations Assessment Summary

Emittance Mode Beam to Emittance Absorber in MTA Stub

Base Primary Beam Energy (GeV):	**0.400**
Base Primary Beam Intensity (ppp):	**1.60E+13**
Base NUMI Sec Beam Energy (GeV):	**0.400**

Proposed Primary Beam Energy (GeV):	**0.4**
Proposed Primary Beam Intensity (ppp):	**1.60E+13**
Proposed Secondary Beam Energy (GeV):	**0.4**
Proposed Secondary Yield per Incident Proton:	**1.00E+00**
Accelerator Cycle (seconds):	**6.0000**
Protons per hour:	9.60E+15
Pulses allowed by interlocked detectors per hour:	**15**

Mucool Labyrinths and Penetrations

Location Enclosure		Beamline Station (feet)	Worksheet	Removable Shielding (efd)	Calculated Base Dose mr/pulse	**Limits** Dose Category	Allowed Dose mr/pulse	Dose for Proposal mr/pulse	Possible Solution	Dose with Solutions mr/pulse	FAIL?
Hatch 9 in Coaxial	P	109	Rakhno TM-2457	21.7	2.30E-03	3	1.667E-01	2.30E-03			
Hatch 5x10 in Waveguide	P	109	Rakhno TM-2457	21.7	2.30E-03	3	1.667E-01	2.30E-03			
20 in Ceiling Vent	P	149	Rakhno TM-2457		3.00E-01	4	8.333E-01	3.00E-01			
3 Gas Manifold Room 3 in.	P	157	Rakhno TM-2457		1.51E-03	4	8.333E-01	1.51E-03			
8 in Cooldown Line	P	177	Higgins Summary		2.27E-04	2	8.333E-03	2.27E-04			
10 in. Transfer Line	P	180	Rakhno TM-2457		6.00E-04	2	8.333E-03	6.00E-04			
4 x 4 in Fridge Room	P	183	Higgins Summary		6.82E-04	2	8.333E-03	6.82E-04			
Sum of Fridge Room Pens	P		Higgins Summary		1.51E-03	2	8.333E-03	1.51E-03			
MTA Labyrinth Pit Door	P	187	Stair Laby Pit		5.02E-04	4	8.333E-01	5.02E-04			
MTA Labyrinth Top Door	P	187	Stair Laby Top		1.10E-07	2	8.333E-03	1.10E-07			
8 x 5 in Utility Fridge Room	P	187	5 in Utility		3.92E-15	2	8.333E-03	3.92E-15			
MTA Ventilation Supply	P	187	Vent Supply		9.32E-10	2	8.333E-03	9.32E-10			
MTA Ventilation Return	P	187	Vent Return		2.97E-09	2	8.333E-03	2.97E-09			

Notes:

	Name/Date	
Originated	W. Higgins	7-Jul-10
Checked		

"Higgins Summary" is "Summary of Labyrinths and Penetrations in the Muon Test Area (MTA) Enclosure,"
W, Higgins, 7 July 2010.