

DUNE Project Risk ID	Title	Summary	Mitigation	Post Mitigation Risk Exposure
RT-131-ND-088	Acceleration Jerk & Vibration	If acceleration isn't sufficiently smooth, then the performance of the NDLa ^r TPC and TMS may be impacted and/or hardware lifetime could be reduced	1. Prototype - Test vibrational response of rail system 2. Fluid analysis, understand technical impacts 3. Integrated vibration/modal analysis (coupled with seismic) - TPC execution to levy requirement on us 4. Investigate if vendor is willing to deliver rails within a flatness and roughness specifications	Med 35% 0 months \$500k Somewhat Substandard
RT-131-ND-073	Time to move	If time allocation to prep, move and restart detector systems exceeds 8 hours, then we may decrease the number of off axis positions we can achieve	1. Prototype - Prototype and analysis shall provide information to TMS and TPC for them to evaluate plans for prep for moving and restart data taking - Prototype will determine acceleration/speed for motion.	Med 35% 0 months \$0 Significantly Substandard
RT-131-ND-089	Energy Chain reactions from large hoses	If the cryogenic hose reaction forces are large, then it could impact the smoothness of the energy chain motion	1. Ensure that the bend radius is generous enough and that there is appropriate strain relief 2. Prototype to validate performance using final cables selected	Med 35% 0 months \$300k Negligible