

MAP_RevisedRiskRegister_2015_1014.xls

ID	MAP WBS 15-04-01	Risk Description	Potential Impact on Project	Risk Score			Ownership	Proposed Action	Post-Action			Estimated Cost of Mitigation				Estimated Mitigation Duration (Working Days)	Estimated Mitigation Probability (%)	Weighted Costs (K\$)	Weighted Durations (Working Days)	Targeted Retirement Date	Status (Active or Retired)	
				L	I	LxI			L	I	LxI	SWF (K\$)	M&S (K\$)	OH (K\$)	Total (K\$)							
1	5.2.1.3.4.5 5.2.1.3.4.6	Additional magnetic issues found with design and surface treatment of MICE 201 MHz Couplers. Note, original prototype cavity showed no adverse B-field impact, so this risk is restricted to the coupler design.	Delay of readiness of MICE Final Step production couplers and full RF module.	2	4	8	MAP	Analyze adverse behavior, evaluate and implement coupler design and surface treatment changes required.	1	3	3	Given that the original prototype tested to ~10MV/m in Lab G magnet field, the likelihood of having an effect that adversely impacts the minimal operating configuration is considered very modest since significant design improvements to the coupler/window design have been implemented and fully simulated.	50	25	55.75	130.8	80	30%	39.23	24	6/14/2015	Retired no impact 9/1/2015
2	5.2.1.5.1.14 5.2.1.5.1.15	RF Module #1 & #2 Assembly	Likely impact is a months-scale delay due to module fit-up issues	2	2	4	MAP	Execute design and/or fabrication corrections at LBNL	1	1	1	Design now directly derives from the SCTS prototype so all assembly issues fully tested.	25	50	36.5	111.5	40	30%	33.45	12	4/5/2016	Active
4	5.4.1.2.2.6 5.4.1.2.2.7	MICE Cooling Demonstration Magnetic Shielding 2 Week Review Window	Delay in construction and delivery of magnetic shielding for MICE Cooling Demonstration.	3	1	3	MAP	Update design to satisfy requirements of MICE Cooling Demonstration operating configuration and then launch fabrication. Impact would be of order 1 month of re-engineering.	1	2	2	Minimal impact anticipated in Cooling Demonstration construction schedule due to significant slack in shielding construction schedule.	50	0	50	100	20	50%	50.00	10	7/23/2015	Retired but incurred \$ 32.3 K est costs for new drawings and change order 10/1/2015
5	5.4.1.2.3.12 5.4.1.2.3.13	MICE Cooling Demonstration Partial Yoke Fit-Up Completion	Likely impact is a multi-month delay due to need to reorder steel & re-machine large parts.	1	2	2	MAP	Execute design and/or fabrication corrections at vendor.	1	2	2		25	253	74.5	352.5	390	30%	105.76	117	2/12/2016	Active
6	5.6.2.1.3 5.6.2.1.4	RF Module #1 & #2 Integration Issues at RAL.	May require design changes or corrections. Potentially results in months-scale field engineering delays.	2	4	8	MAP	Correct all identified issues (eg, vacuum performance) in the field.	1	2	2	SCTS test in the MTA helps to define the necessary operation specifications and allow them to be dealt with in advance.	150	75	167.3	392.3	80	30%	117.68	24	2/28/2017	Active
7	5.6.2.2.3 5.6.2.2.4	Spectrometer Solenoid integration and commissioning issues at RAL. Delays in readiness for SS commissioning and operations	Delay of MICE Step IV commissioning and experimental operations.	3	4	12	MAP	Assess failure and repair magnet(s), power and quench protection systems. Likely delay of > 3 months in commissioning schedule.	1	3	3	Magnets had been fully tested in a range of configurations in the US. Lack of operational readiness and local support means increased US presence at RAL. Internal damage occurred during testing at RAL. Need to assess whether minor repairs or reconfiguration of power supplies or quench protection systems will allow Step IV operations without major repairs.	200	100	223	523	80	50%	261.50	40	8/3/2015	Risk has been incurred, costs are being accrued Active
8	5.6.2.3.3 5.6.2.3.4	MICE Step IV Partial Yoke Shielding Integration Issues at RAL.	Likely impact is a multi-month delay due to need to re-machine large parts.	1	4	4	MAP	Re-do integration engineering for partial yoke solution in MICE Hall.	1	3	3	Decision to do full fit-up of components prior to shipping to UK largely mitigates this risk.	25	50	36.5	111.5	80	10%	11.15	8	9/25/2015	Retired no impact 7/1/2015
9	5.6.2.4.3 5.6.2.4.4	MICE Cooling Demonstration Partial Yoke Shielding Integration Issues at RAL.	Likely impact is a multi-month delay due to need to re-machine large parts.	1	4	4	MAP	Re-do integration engineering for partial yoke solution in MICE Hall.	1	3	3	Decision to do full fit-up of components prior to shipping to UK largely mitigates this risk.	25	50	36.5	111.5	80	10%	11.15	8	5/16/2017	Active
10	5.2.1.5.4.5 5.2.1.5.4.6	RF Modules # 1 & #2 Installation and Commissioning at RAL	Need to have US MICE augment UK technical staff	4	3	12	MAP	Send US engineers & techs to RAL to aid in the UK installation & commissioning	1	3	3	Augment the RF technical team for UK installation and commissioning	130	0	110	240	80	70%	168.00	56	5/8/2017	Active
Totals for All Items (Active Risks Only)												355	428	424.8	1208				697.5	257		

color code: Risk retired since the April 2015 RLS Review
color code: new Risk added since April 2015 RLS Review

Sym	Definition	Range
L	Likelihood	1-5
I	Impact	1-5

Rank	Prob (%)
1	10%
2	30%
3	50%
4	70%
5	90%

Rank	Work Days
1	1-20
2	21-40
3	41-80
4	81-120
5	>120