

ID	Risk Description	Potential impact on project	Risk score			Ownership	Proposed Action	Post-action risk score			Comment / Conclusion	Cost of mitigation		Likely retirement of requirement
			L	I	LxI			L	I	LxI		Staff years	Non-staff (€k)	
MICE 3	Magnetic field effecting operation of electrical equipment relating to the continued operation of the cooling channel magnet systems and detectors.	Inability to operate the cooling channel	5	5	25	MICE - UK / MAP	Installation of a partial return yoke has mitigated the major risk. Movement of the control and power supply equipment to a dedicated room outside of the magnetic field.	1	4	4	Much work has been completed and provision of additional rack room has enabled the majority of the sensitive equipment to be moved away from the hall. The PRY has not yet been installed and so has not been tested, the residual risk still applies. Significant investment from UK and US to mitigate risk.	2	100	End of project
MICE 4	Extended period of re-training for the lattice of magnets for Step IV - SS1/AFC/SS2.	Timescales for the training period, cost of the amount of LHe required to carry out the training the availability of the LHe. Expert personnel required to be available for magnet operations over a protracted period of time.	4	5	20	MICE-UK / MAP	Discussions with BOC (or supplier) to agree delivery timescales and availability during heavy use periods. Magnet integration task force to define commissioning method to keep schedule and cost to a minimum.	4	4	16	Each re-cool and fill of the Spectrometer Solenoid can take upto 500 LHe, AFC around 100L. Each full lattice quench could cost in the region of €7k. Initial investigations with BOC show that the predicted amount of LHe will be available during the commissioning period.	1	100	End step IV
MICE 5	AFC Module #2 has the same type of fault as AFC module #1	Extended delay and uncertain cost burden.	4	5	20	MICE - UK	Bring forward test of module #2. Shorter timescale for training runs. Purchase of additional LHe if required to shorten timescale	4	5	20	Testing of the second Focus Coil has been successful. Some thermal performance required investigation	0.2	15	Oct-14
MICE 7	VAT payable on the delivery of all equipment imported from the non-UK collaborators	Budgetary constraints resulting in reduced work force and installation activities being carried out.	4	5	20	MICE UK	Escalation of the issue to the legal department of the STFC	2	4	8	At the moment it is unknown if the cost can be mitigated. STFC to bear the cost burden, 20% of the value of each item imported. With the shipping of the RFCC removed very large amounts are no longer possible.	0.1	100	Impacts final step
MICE 8	Resourcing issues	Inability to complete significant sections of work on agreed time or cost scales.	4	5	20	MICE - UK / MAP	Escalation of the issue to the STFC and DOE.	4	5	20	Only action open to the project is to review and reduce the scope. Extension of the project into future financial years	5		Impacts Step IV and all other steps.
MICE 9	Senior management of the MAP collaboration / MICE-US changes.	Leadership and direction of the construction team unfocused.	4	5	20	MAP		n/a	n/a	n/a				End of Step 3PI/2
MICE 10	Late delivery of the PRY and / or RFCC for Step V after advanced scheduling.	Standing army cost for period after hall preparations are complete and receipt of the PRY materials / RFCC	3	5	15	MICE-UK / MAP	Interaction with the MICE-US construction team. Construction of the RFCC module at a external institution.	2	5	10	Cost will need to be borne as releasing and then re-forming the team will be difficult with an unknown timescale.	€90k / Month		End of Step 3PI/2
MICE 11	US budget cuts changing magnet manufacture, commissioning and delivery	Halting project installation and subsequent data taking. Loss of key personnel from the project. Inability to continue with full cooling program.	4	5	20	MAP	Discussion with senior STFC management.	4	5	20	DOE review of MAP in August 2014. Result of the review with regard to progress of the project will be received before the end of the US Financial year.			Impacts Step IV and all other steps.
MICE 12	RF Power systems are not available for cavity testing	The critical path items following the RF system installation will extend in time. Testing of the cavities with and without B field. Commissioning of the channel and gaining data for the final step	4	5	20	MICE UK	Discussions with UK senior management to gain sufficient staff to carry out the work required on the RF systems and controls. Additional technical staff from collaborating institutes for installation work.	2	5	10	Successful completion of the RF power system installation will result in delays leading to the US collaborators being unable to contribute to the data taking period for Step 3PI/2.	2	75	End of Step 3PI/2
MICE 13	Focus Coil 1 repairs extended timescale	Repairs enabling the Focus Coil 1 to operate at the nominal currents for the experiment are not completed in time for installation and operation in the Step 3PI/2	4	5	20	MICE UK	Scientific substantiation for the need to run at the higher current. Discussions with the manufacturing company to gain realistic timescales and cost.	4	5	20	Following scientific substantiation there may not be the need to make repairs to the Focus Coil 1. This would remove the risk of late delivery back to the experiment	1	100	End of Step 3PI/2