

MICE Step Retired? Accrued?	Risk ID #	WBS	RISK Milestones Alan Bross - 6nov2013 updated by Peter Garbincius - 3aug2014	Start Date	Finish Date Extended Calendar Days	Nov 2013 Est. Cost of Mitigation \$ K US	Accrued Cost of Mitigation \$ K US	Remaining Est. to Mitigate Risk \$ K US	Risk Impact and Actions
IV-R		1.05.02.01.01.04	(R1K)-(R1) - Spectrometer Solenoid Controls Operational Readiness Certification	05/29/13	Completed		0		IMPACT:(Impacts include delayed magnet training and subsequently difficulty commissioning the full cooling channel beam line) - ACTION:(Continued improvements of SC magnet controls)
V Retired	10	1.05.01.01.03.04.05	(R1) - 201 MHz All parts for SC MICE test at FNAL (Prototype) - Possible Costs for this R1 Risk (UID-1407)	12/03/13	Completed 9% accrued	423	40		IMPACT:(Delay in RFCC lite test) - ACTION:(Redesign of 201 MHz RF power coupler) accrued ~ 5 month delay in start of SCTS testing program
V Retired	4	1.05.01.01.03.09	(R1) - 201 MHz Assembly MICE SC Test System (Prototype) - Possible Costs for this R1 Risk (UID-1414)	01/09/14	Completed 23% accrued	523	120		IMPACT:(Delay in final RF design) - ACTION:(Assess failure and modify design accordingly) accrued ~ 5 month delay in start of SCTS testing program
V Retired	1	1.05.02.02.02.04.06	(R1) - CC Coil #1 Test - Possible Costs for this R1 Risk (UID-1564)	03/07/14	Completed 90% accrued	200	180		IMPACT:(Delay of Assembly and Testing of CCM Prototype) - ACTION: (Assess failure and incorporate necessary modifications into preparation of 2nd cold mass) - Testing Overrun costs in FY14
V Retired	9-A	1.05.02.02.04.03.05	(R1) - CC Cryostat #1 (CCM Prototype) Arrived at FNAL - Possible Costs for this R1 Risk (UID-1657) - Cryostat Body Delivered! Total RISK/2 = \$ 300K/2	06/23/14	Completed	150	0		IMPACT:(Delay in CCM prototype assembly) - ACTION:(Assess problems with cryostat construction & correct) - Delay impacts delivery date of RFCC to RAL Split Risk into Cryostat body (delivered) and Cooling Circuit and Thermal Shield (still waiting)
V	9-B	1.05.02.02.04.03.05	(R1) - CC Cryostat #1 (CCM Prototype) Arrived at FNAL - Possible Costs for this R1 Risk (UID-1657) - waiting on Thermal Shield and Cooling Circuit \$ 300 K/2	06/23/14	171	150		150	IMPACT:(Delay in CCM prototype assembly) - ACTION:(Assess problems with cryostat construction & correct) - Delay impacts delivery date of RFCC to RAL Split Risk into Cryostat body (delivered) and Cooling Circuit and Thermal Shield (still waiting)
IV	7	1.05.02.01.05.07	(R1) - SS#1 & SS#2 Spectrometer Solenoids Ready for Operations - Possible Costs for this R1 Risk (UID-2208)	11/05/14	176	462		462	IMPACT:(Delay of start of Step IV) - ACTION:(Access problems & make corrections)
	13	1.05.03.01.02.03.05	(R1) - MICE Step V-VI Magnetic Shielding 2 Week Review Window - Possible Costs for this R1 Risk (UID-1799)	06/17/16	173	1131		1131	IMPACT:(Delay in finalization of Step V-VI shielding design) - Action(Increase engineering effort)
V	11	1.05.02.02.05.05.04	(R1) - RFCC Prototype Test (RFCC_Lite - Single Cavity) - Possible Costs for this R1 Risk (UID-1701)(Task Charged to MuCool Test Area Budget)	11/23/16	176	723		723	IMPACT:(Delay in RFCC#1 delivery to RAL) - ACTION:(Evaluation of design limitations and development of mitigation plan) Replace with test of SCTS at MTA incl offset to test Couplers in Magnetic Field - Risk remains, but reduces Probability to 25%
V	5	1.05.02.02.05.04.03	(R1) - RFCC_lite assembly/integration problems in MTA (UID-2180)	05/05/16	176	523		523	IMPACT:(Delay in RFCC_lite test & vetting of RF design) - Action:(Evaluate assembly issues and address) - Replace with test of SCTS at MTA incl offset to test Couplers in Magnetic Field - Risk remains, but reduces Probability to 25%
V	17	1.05.05.01.03.04	(R1) - MICE-US RFCC Beam line Integration - Possible Costs for this R1 Risk (UID-1866)	05/16/18	170	562		562	IMPACT:(RF Integration problems)(Likely impact is a 6-12 month delay in MICE Step V readiness) - ACTION:(Re-visit integration issues and correct)
IV Retired	2	1.05.02.01.03.01.05	(R2) - SS#2 Re-Train and Re-Test - Possible Costs for this R2 Risk (UID-1501)	04/16/13	Completed	562	0		IMPACT:(Delay of MICE Step IV commissioning and experimental operations.) - ACTION: (Assess failure and repair magnet. Likely delay of >6 months for final delivery)
IV Retired	12	1.05.03.01.01.03.05	(R2) - MICE Step IV Magnetic Shield Fabrication Decision - Possible Costs for this R2 Risk (UID-1775)	12/02/13	Completed	0	0		IMPACT:(Inability to deploy partial yoke shielding for Step IV resulting in increased experimental risk. Step IV baseline assumes no requirement for partial yoke solution, hence minimizing immediate impact) - ACTION:(Discontinue work on Step IV Partial)
IV Retired	3	1.05.02.01.04.02.05	(R2) - SS#1 Train and Test - Possible Costs for this R2 Risk (UID-1522)	12/13/13	Completed 87.5% accrued	723	633		IMPACT:(Delay of MICE Step IV commissioning and experimental operations) - ACTION:(Assess failure and repair magnet. Likely delay of >1 year for final delivery)
V Retired	8	1.05.02.02.02.10.04	(R2) - Cold Mass #2 Winding (China) - Possible Costs for this R2 Risk (UID-1587)	06/02/14	Retired	523	0		IMPACT:(Delay in CCM Prototype and likely delay in MICE Step V in the event that the prototype cold mass (#1) fails) - ACTION:(Further development of winding procedures) - Based on CC Coil #1 training behavior, no major modification to winding procedures will be required
IV	14	1.05.05.01.04.04	(R2) - MICE-US Shielding Step IV Component Integration - Possible Costs for this R2 Risk (UID-1873)	06/26/15	115	262		262	IMPACT:(6 month delay in MICE Step IV data) - ACTION:(Re-do integration engineering for partial yoke solution in MICE Hall)
V	6	1.05.01.01.04.08.07	(R2) - 201 MHz Production Cavity Assembly & Test (RFCC#1) (Production) - Possible Costs for this R2 Risk (UID-1443)	10/01/15	120	1269		1269	IMPACT:(Re-work of critical hardware and potential delay of RFCC#1 delivery) - ACTION:(Assess failure and modify design)
IV	15	1.05.05.01.02.04	(R2) - MICE-US SS Component Integration - Possible Costs for this R2 Risk (UID-1861)	12/11/15	118	562		562	IMPACT:(Delay of start of MICE step IV) - ACTION:(Continued improvements of SC magnet controls)
VI	18	1.05.05.01.04.08	(R2) - MICE-US Shielding Step VI Component Integration - Possible Costs for this R2 Risk (UID-1877)	07/02/18	113	562		562	IMPACT:(6-12 month delay in MICE Step V readiness) - ACTION:(Re-visit integration issues and correct)
IV Retired	2	1.05.02.01.03.03.05	(R3) - SS#2 Operation Failure with Iron Shield - Possible Costs for this R3 Risk (UID-1509)	09/03/13	Completed		0		IMPACT:(-) - ACTION:(-)
IV Retired	3	1.05.02.01.04.03.05	(R3) - SS#1 Operation Failure with Iron Shield - Possible Costs for this R3 Risk (UID-1529)	01/16/14	Completed		0		IMPACT:(Delay in SS1 mapping - Low risk.) - ACTION:(Access problems and implement fix)
V	16	1.05.05.01.01.08	(R3) - RFCC#1 Component Integration - Possible Costs for this R3 Risk (UID-1855)	10/22/18	57	1123		1123	IMPACT:(Delay in MICE Step V/VI) - ACTION:(Access problems & apply appropriate modifications)
V	NEW RISK		Extra Cost for Fabrication and Testing of Coupling Coil Magnet external to Fermilab		172 guess	275		275	IMPACT: Delay Delivery of RFCC to RAL by at least 1/2 year, incur RISK totaling \$ 975 K = 30% of remaining costs, use Risk Probability = 100%