

Revision Date: 30-September-2013																		
No.	Risk Title	Date Submitted	Submitted By	Date Last Revised	Owner	Description	Risk Timeframe	Likelihood Assessment			Impact Assessment			Risk Rating	First Indicator	Risk Handling Approach (Avoid, Mitigation, Transfer, Accept)	Steps for Handling the Plan	Risk Retired (Mark 'X' for Yes and date)
								Technical	Cost	Schedule	Technical	Cost	Schedule					
FY0506-1 (Retired)	WBS: 1.4.2.1 (Hall B Magnets)	Jul-05	L. Elouadrhiri	Sep-12	C. Rode	Unforeseen technical problems in Hall B superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair.	X
FY0506-1A	WBS: 1.4.7 (Hall B Torus)	Feb-13	L. Elouadrhiri	Jun-13	C. Rode	Unforeseen technical problems in Hall B superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work. Vendor performance issues.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair; 8) Additional JLab oversight at vendor including engineering, procurement, and QA; 9) Analyze baseline schedule contingency for possibilities to increase schedule float; 10) Assess impacts and path forward following the contract termination; 11) Contract with FNAL for coil cold mass fabrication; 12) Establish JLab Magnet Task Force includes design effort and cryostat factory.	
FY0506-1B	WBS: 1.4.7 (Hall B Solenoid)	Feb-13	L. Elouadrhiri	Jun-13	C. Rode	Unforeseen technical problems in Hall B superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work. Vendor performance issues.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair; 8) Additional JLab oversight at vendor including engineering, procurement, and QA; 9) Analyze baseline schedule contingency for possibilities to increase schedule float; 10) Assess impacts and path forward following the contract termination; 11) Contract with FNAL for coil cold mass fabrication; 12) Establish JLab Magnet Task Force including design effort and cryogenics.	
FY0506-2	WBS: 1.4.2.2 (Hall B Detectors)	Jul-05	L. Elouadrhiri	Jun-13	C. Rode	Cost and schedule over-runs in fabricating the Hall B Silicon Vertex Tracker.	Construction	Low	Moderate	Moderate	Low	High	Moderate	High	Lack of in-house experience with Silicon Vertex Tracker detector.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Develop alternative procurement strategy in case selected vendor or components become unfeasible; 4) Vendor selection to emphasize previous successful projects of a similar nature; 5) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 6) Close monitoring and coordination of vendor work with laboratory representatives, including on-site visits of the vendor; 7) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 8) Convene Director's Review of SVT design changes under consideration.	
FY0506-3 (Retired)	WBS: 1.4.3.1 (Hall C Magnets)	Jul-05	H. Fenker	Sep-12	C. Rode	Unforeseen technical problems in Hall C superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair.	X
FY0506-3A	WBS: 1.4.3.1.1 (Hall C HB Magnet)	Feb-13	H. Fenker	Jun-13	C. Rode	Unforeseen technical problems in Hall C superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair.	
FY0506-3B	WBS: 1.4.3.1.2 (Hall C Q1 Magnet)	Feb-13	H. Fenker	Jun-13	C. Rode	Unforeseen technical problems in Hall C superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair.	
FY0506-3C	WBS: 1.4.3.1.3 (Hall C D/Q2/Q3)	Feb-13	H. Fenker	Jun-13	C. Rode	Unforeseen technical problems in Hall C superconducting magnets that are severe enough to compromise ultimate performance or that require costly re-work.	Construction	Moderate	Moderate	Moderate	High	High	Moderate	High	Experience with previous SC magnets procured by JLab.	Mitigation	1) Perform R&D and optimization studies to reduce risks where appropriate; 2) Thorough review of design; 3) Vendor selection to emphasize previous successful projects of a similar nature; 4) Specification of contract milestones to provide appropriately staged testing and adequate schedule float to recover from problems identified in early stage; 5) Close monitoring and coordination of vendor work with laboratory engineering representatives, including on-site visits of the vendor; 6) Provision of adequate schedule float in commissioning stage to address problems discovered during commissioning; 7) Maintain core staff at laboratory with relevant experience to recover from problems: superconducting magnet engineering, cryogenic engineering, vacuum and cryogenic fabrication and repair.	
FY0506-4	WBS: 1.6.3 (Hall D Civil)	Jan-06	R. Yasky	Jan-10	R. Yasky	Cost increase due to scope changes and/or uncommon market fluctuations in the conventional facility construction industry.	Construction	Low	Low	Low	Low	Moderate	Moderate	Low	Architect-Engineering firm's (A/E) report on the 35% design project cost estimate.	Mitigation	1) At the beginning of design, a space program and design criteria document will be developed to establish the basis of design. Changes to this document throughout the design process will be tracked to manage the scope; 2) Costs will be monitored during the design and cost estimates will be updated at the 35%, 60%, and 100% design phases; 3) The design process will use the Whole Building Design concept which incorporates building occupants and maintenance personnel into the design process to ensure that the facilities as designed meet the operational requirements. Also, there will be design reviews at the 35%, 60%, and 100% design phases; 4) An independent team will perform a value engineering study of the 35% design to identify cost saving alternatives; 5) Conduct an independent cost estimate review of the A-E's 60% design submittal; 6) Conduct an independent constructability review of the A-E's 100% design submittal; 7) Conduct a peer review by other DOE laboratories to review translation of the physics requirements into the design development; 8) Firm fixed price contract.	X
FY0607-1	WBS: 1.3.1 (Cryomodules)	Feb-06	J. Preble	Apr-07	J. Preble	Technical performance risk of the cavity end group thermal performance.	Design	Low	Low	Low	Low	Moderate	Low	Low	Evaluation of results of testing Renaissance.	Mitigation	1) Develop and execute an R&D plan to identify reasons for under-performance of 2nd prototype cryomodule; redesign components with problems; 2) Prototype and test cavities built using the revised designs. Tests will be in an environment similar to being installed in a cryomodule; 3) Cavity sub-systems addressed include the 7 cell cavity with end groups, rf power (both fundamental and higher-order mode) couplers, and thermal strapping as well as associated systems such as frequency tunes. This will be a fully dressed operational test of the cavity system; 4) Testing will be performed in the Cryomodule Test Facility utilizing the Horizontal Test Bed. Both low and high power rf testing is included.	X

FY0607-2	WBS: 1.3.3 (Cryogenics)	May-06	D. Arenius	Apr-10	D. Arenius	Increasing cost of stainless steel and carbon steel metals used in the manufacture of cryogenic refrigeration equipment and installation materials.	Construction	Low	Low	Low	Low	Low	Low	Low	Low	April, 2006 update of cost estimates.	Mitigation	1) Monitor CRU and MEPS stainless steel and carbon steel price index trends on monthly and quarterly basis; 2) Be ready to initiate associated procurements as soon as possible.	X
FY0607-3	WBS: 1.3.4 (Accelerator Beam Transport)	May-06	M. Wiseman	Dec-08	M. Wiseman	Cost over-runs due to raw material price inflation.	Construction	Low	Low	Low	Low	Low	Moderate	Low	Low	April, 2006 update of costs.	Mitigation	1) Continue to monitor material prices. 2) Place contracts as early as possible in the project.	X
FY0910-1	WBS: 1.6.3 (Hall D Civil)	Jun-09	R. Yasky	Aug-10	R. Yasky	Cost increase due to inadequate contract specifications for dewatering contaminated groundwater.	Construction	Low	Low	Low	Low	Low	Low	Low	Low	Construction contractor's notice to JSA/JLab of changed conditions.	Mitigation	1) Hire a dewatering "expert" consultant to review the contract specifications and provide support regarding this issue. 2) Review and evaluate the contractor's proposed alternate dewatering systems. 3) Work cooperatively with the contractor to minimize cost. 4) Hire a construction lawyer to evaluate the contract specifications and advise JLab on the course of action to resolve the Contractor's request for equitable adjustment (REA).	X
FY0910-2	WBS: All	Jun-09	C. Rode	Sep-11	C. Rode	Potential schedule delays resulting from insufficient ramp-up of manpower during construction phase.	Construction	Low	Low	Moderate	Low	Low	Moderate	Moderate	Moderate	Manpower on project during calendar 2009 below baseline for several consecutive pay periods.	Mitigation	1) Develop profile from baseline plan of manpower needs by skill type and date. 2) Identify additional in-house personnel to be married to 12 GeV Project. 3) Post, recruit, and hire additional personnel as needed.	X
FY1011-1	WBS: 1.6.3 (Hall D Civil)	Jun-09	R. Yasky	Apr-10	R. Yasky	Schedule delays due to redesign of the cooling towers for CHL #2.	Construction	Low	Moderate	Moderate	Low	Low	Low	Low	Low	Jefferson Lab Facilities Management Group identified a project to recapitalize CHL #1 cooling towers.	Mitigation	1) Perform a life cycle cost analysis of the two alternatives for providing cooling water for the CHL #2 compressors - stand alone cooling tower plant for CHL #2 (design complete) or a centralized plant for both CHL #1 & #2. 2) If design for a centralized cooling plant is needed, utilize the same Architect-Engineer firm that did the original design CHL #2 stand alone cooling towers to minimize the time required for redesign. 3) Monitor the 12 GeV Upgrade baseline schedule to ensure no impact to the CHL #2 compressor commissioning schedule.	X
FY1011-2	WBS: 1.6.3 (Hall D Civil)	Jun-09	R. Yasky	Sep-10	R. Yasky	Cost increase and schedule delays due to Hall D floor slab design error.	Construction	Low	High	Moderate	Low	Moderate	Moderate	High	High	Architect-Engineer notified JLab that the design of the Hall D floor slab did not take into consideration hydrostatic pressure uplift and may need to be thicker by as much as 2 feet.	Mitigation	1) Issue suspension of work for the Hall D floor slab to the construction contractor to minimize the amount of rework required. 2) Redesign the Hall D floor slab to minimize the additional excavation depth and use the reinforcing steel already on site to maximum extent possible. 3) Issue notice to proceed (NTP) with the request for proposal for the change order to minimize schedule impacts. 4) Recover costs from the Architect-Engineer for rework and damages due to the design error. Submit a project change request for the design error impacts.	X
FY1011-3	WBS: 1.3.2 (Power Systems)	Jun-09	B. Merz	Jun-11	W. Merz	The possible need for damping of the 2nd harmonic from the klystrons had been identified by the Cryomodule subsystem.	Construction	Low	Moderate	Low	Low	Moderate	Low	Moderate	Moderate	Fall 2009 assessment of integrated cryomodule design.	Mitigation	1) Insure that required dampers are designed for the actual requirements vs having excessive margin. 2) Use competitive bidding. 3) Install additional dampers in South Linac cryomodules to test performance and determine needs for North Linac 12 GeV cryomodules prior to their installation.	X
FY1011-4	NA	Apr-10	C. Rode	Jan-12	C. Rode	Programmatic – Continuing Resolution in FY12 greater than 3 months will have impact to the performance baseline due to delay in appropriations occurring on October 1 of any given year. Under a continuing resolution, funding is generally limited to 1/12 of the previous year's appropriated amount which, until a project has been appropriated, its peak funding can impact cost and schedule.	Construction	Low	Low	Low	Low	High	Moderate	Moderate	Moderate	March 2009 - \$65M ARRA funds being processed.	Mitigation	1. Carefully plan the procurement profile, approving only moderate risk and time critical elements. 2. Track the FY12 obligation profile. 3. Track the FY12 phased obligation liability. 4. Request \$6M supplemental 1QFY12 Oakridge Office funding.	X
FY1011-5	WBS: 1.5.1 (Hall D Solenoid)	Jun-10	G. Young	Jun-13	G. Young	Refurbishment and repair of Hall D Solenoid superconducting magnet encounters technical and/or schedule difficulties which are severe enough to compromise the ultimate performance or the ability to meet 12 GeV Project cost and schedule milestones.	Construction	Low	Low	Low	Low	Low	Low	Low	Moderate	Delays in the Hall D Solenoid refurbishment and test plan.	Mitigation, possible replacement.	1) Modeling of magnetic forces with modified steel yoke as a function of excitation current in each of the 4 coils. 2) Thorough analysis of possible faults and resulting magnet current excursion and heating due to shorts, ground faults, or other problems. 3) Preparation of test stand to test each coil with yoke at full excitation current. Preparation of instrumentation readouts for sensors, particularly current and stress/strain readouts, as well as standard JLab cryogenic controls. Refurbishment of cryogenic controls and supply lines and control reservoirs. Reconditioning of helium liquefier. 4) Addition of banding steel to yoke to minimize fringe field in external time-of-flight and forward calorimeter detectors. 5) Refurbishment of liquid nitrogen shields to address known corrosion issues; simultaneous investigation of condition of all internal elements of coils thus opened and thorough checking for leaks. 6) Addition of reinforcement to "overhanging" turns in Coil 2 to provide coil support during high-current operation. 7, 7) Full program of cool-down, current excitation, and warm up for each coil individually in the JLab Test Lab, followed later in Hall D by full magnet cool-down, current excitation and warm up, prior to releasing magnet for use and thence for installation of Hall D detector components. 8) Monitor the progress of refurbishment and test plan through weekly meetings. 9) Monitor the progress of refurbishment and test plan through monthly EVMS meetings. 10) Evaluate options and impacts of operating magnet at lower current setting. 11) Evaluate options for acquiring a second solenoid as a back-up. 12) Convene a Director's Review to evaluate risk mitigation plan. 13) Design a replacement solenoid coil. 14) Determine steel yoke cladding needed to control fringe fields. 15) Determine configuration of cryogenic support systems to satisfy operational safety needs.	X
FY1011-6	WBS: 1.3.1 (Cryomodules)	Jun-10	J. Hogan	Jun-11	J. Hogan	Impact of interactions between TEDF and 12 GeV cryomodule production.	Construction	Low	Moderate	Moderate	Low	Moderate	Moderate	Moderate	Moderate	May 2010 assessment of integrated cryomodule production schedule with TEDF construction schedule.	Mitigation	1) Incorporate estimated impacts on the cryomodule schedule due to TEDF construction now. 2) Add staff to cryomodule assembly as necessary to maintain schedule. Use second shift if warranted. 3) Use experienced staff as much as possible. Team new personnel with experienced personnel to enhance training and mitigate reduction in productivity. 4) Continue close coordination with the TEDF project construction plans to identify conflicts and potential solutions as early as possible.	X

FY1011-8	(Hall D Civil)	Sep-10	R. Yasky	Sep-11	R. Yasky	Hall D RFE schedule	Construction	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Contractor's August 2010 schedule projected update projected Phase I completion on December 13, 2010. Hall D RFE milestone is November 2010	Mitigation	1) Develop discovery schedule. 2) Track progress and update schedule for current projected completion date on a weekly basis. 3) Approve contractor to work after hours and on weekends to support the recovery schedule.	X
FY1112-1	WBS: 1.4.2.2 (Hall B Detectors)	Dec-10	G. Young	Jan-12	G. Young	Cost over-runs in fabricating the Hall B High Threshold Cerenkov Counter (HTCC).	Construction	Low	Moderate	Low	Low	Moderate	Low	Moderate	Difficulty in finalizing an engineering design for a manufacturable HTCC Containment Vessel	Mitigation	1) Perform Engineering analysis of various options for structural materials. 2) Thorough review of design. 3) Consultation with potential vendors on metal vs structural foam, load bearing properties, dimensional control. 4) Physics simulation of detector response – HTCC must be in path of particles before the high-resolution tracking section and thus must not perturb particle momenta and trajectories too much. 5) Alignment tolerance and adjustment range for mirrors. 6) PMT mounting points, shielding and services locations. 7) Provision for schedule float.	X
FY1112-2	WBS: 1.4.2.4 (Hall B Electronics )	Dec-10	G. Young	Jan-12	G. Young	Increased cost in fabricating the Hall B Electronics.	Construction	Low	Moderate	Low	Low	Moderate	Low	Moderate	Revisit the manufacturing and testing cost estimates for ADCs, TDCs, and trigger modules as part of the annual update process.	Mitigation	1) Obtain vendor cost estimates in response to full board construction information and components lists. 2) Testing program for ADC, TDC and trigger modules, both singly and at crate level. 3) Check support component counts to instrument full as-built detector. 4) Check of subsystem needs, including HV, LV, crates, cabling.	X
FY1112-3	WBS: 1.5.2 (Hall D Detectors)	Dec-10	G. Young	Jun-11	G. Young	Construction effort for Hall D detectors, including labor levels and materials costs, for Central Drift Chamber.	Construction	Low	Low	Moderate	Low	Low	Low	Moderate	Delays in the Hall D CDC detector construction due to delay in straw delivery.	Mitigation	1) Regular contact with straw vendor. Re-drafting of procurement specifications for straw vendor in form more comprehensible to sub-vendors of aluminized Kapton used to form straws. 2) Develop, in coordination with Carnegie Mellon (the CDC assembly vendor), an alternate work plan which keeps the CDC assembly line operating while waiting for delivery of the remaining straws.	X
FY1112-4	WBS: 1.3.4 (Accelerator Beam Transport)	Dec-10	M. Bevins	Jun-11	M. Bevins	Septa magnet contract cost increase due to vendor non-performance.	Construction	Low	Moderate	Low	Low	Moderate	Low	Moderate	Lack of resolution of contractual issues between subcontractor and JLab	Mitigation	1) Work to improve communication with subcontractor. 2) Evaluate potential for contract termination. 3) Evaluate pool of vendors. 4) Terminate contract and rebid if necessary.	X
FY1112-5	WBS: 1.3.1 (Cryomodules)	May-11	J. Hogan	Jun-13	J. Hogan	Cost increases to cover C100-1 tunnel microphonics testing.	Construction	Moderate	Moderate	Low	Low	Moderate	Low	Moderate	Analysis of data from testing of R100 cryomodule.	Mitigation	1) Suspend welding cavities into helium vessels. 2) Suspend assembly of CM 5-10. 3) Get data on R100 in tunnel. 4) Get data on C100-1 in tunnel. 5) Additional effort will be evaluated based on R100 and C100-1 data. 6) Implement corrective items as needed. 7) The following may be needed. Need will be evaluated based on R100 and C100-1 data: a. Test corrective RF control algorithms on C100-1 in CMTF; b. Test mechanical corrections; c. Implement corrective items as needed	
FY1112-6	WBS: 1.3.2 (Power)	Jun-11	W. Merz	Jun-13	W. Merz	Delayed delivery of magnet power supplies.	Construction	Low	Low	Moderate	Low	Low	Low	Moderate	Design, testing, delivery of first articles.	Mitigation	1. Requiring current vendor to generate a revised schedule with detailed listing of remaining First Article (FA) tasks and resource assignments needed to complete the FA. Schedule to include measurable milestones to be able to determine if weekly goals are achieved. 2) Monitor completion of first article power supplies (2 units) in accordance with revised schedule. 3) Vendor instructed to supply a revised production schedule for all remaining work. 4) 4. Released a new RFI to alternate vendors (responses to be received in July 2011) in the event the contract must be re-bid. The RFI contains a desired schedule which will support accelerator commissioning. 5) 5. Consideration is given to breaking the current contract into two pieces; one remaining with current vendor and; one going to a new vendor. 6) Setting a Must Act Date of Sept 15, 2011, beyond which we cannot continue with present vendor and must pursue alternate sources.	
FY1112-7	WBS: 1.3.1 (Cryomodules)	Jun-11	J. Hogan	Sep-12	J. Hogan	Cost and schedule risk due to coordination with TEDF schedule during transition out of Test Lab to new Work Areas.	Construction	Low	Moderate	Low	Low	Moderate	Low	Moderate	Review of cryomodule production schedule and TEDF activity schedule.	Mitigation	1) Coordinate closely with TEDF project management. 2) Establish TEDF interface dates in WBS 1.3.1 baseline and track float accordingly. 3) Review cavity string assembly resources to improve schedule and reduce schedule conflict risk. Adjust resources where appropriate.	X
FY1112-8	WBS: 1.4.3.1 (Hall C Magnets)	Jun-11	G. Young	Jan-12	H. Fenker	Cost of steel yokes for Hall C Q2, Q3, and Dipole magnets.	Construction	Low	High	Low	Low	Low	Low	Moderate	Increases in Hall C magnet yoke cost based on initial bids	Mitigation	1) TOSCA analysis of various magnet yoke designs. Comparison of predicted field quality with requirements for SHMS. 2) Contacts with vendors concerning steel properties, pricing, delivery schedules for various fabrication and machining options	X
FY1112-9	WBS: 1.3.3.2 (Cryogenics)	Jun-11	C. Rode	Sep-11	J. Creel	Cost of cryogenic infrastructure for Hall D.	Construction	Low	High	Low	Low	Moderate	Low	High	Increases in the Hall D cryogenics infrastructure scope and cost estimate	Mitigation	1) Analysis of capabilities of existing Test Lab equipment for Hall D Solenoid, capabilities of existing LASS Solenoid magnet box, and the planned Hall D Cryogenics system and target loop. 2) Design, review, construction and installation of the required components.	X
FY1112-10	WBS: 1.6.3 (Hall D Civil)	Sep-11	R. Yasky	Jan-12	R. Yasky	Cost increase due to Construction Contractor's claim that JLab directed acceleration.	Construction	Low	High	Moderate	Low	Moderate	Low	High	Construction contractor's request for compensation for directed acceleration.	Mitigation	1. Evaluate the weather impacts to the project to ensure the contractor has been awarded time for excusable delays. 2) Hire outside counsel to evaluate the contractor's claim and provide support in resolution of the claim. 3) Work cooperatively with the contractor to help minimize cost. 4) Add time to contract in a timely manner for any future excusable delays.	X
FY1213-1	NA	Jan-12	C. Rode	Jun-13	C. Rode	Programmatic – FY12 funding allocation was \$50M, a reduction of \$16M from the baseline plan. This directed change will require a rebaseline of the Project.	Construction	Low	High	High	Low	High	High	High	Federal budget passed, and reduction to JLab 12 GeV Project funding level known.	Mitigation	1. Carefully plan the procurement profile, approving only moderate risk and time critical elements. 2. Shift scope out of FY12 into FY13. 3. Extend the installation shutdown from 12 months to 16 months. 4. Delay beam delivery to experimental Hall by ~2 to ~6 months. 5. Evaluate with DOE need to rebaseline Project.	X
								Technical	Cost	Schedule	Technical	Cost	Schedule					
								Likelihood Assessment			Impact Assessment							