27-May-2014

Report Outline and Reviewer Assignments
For the
Director's Independent Design and CD-2/3 Review
of the CMS Detector Upgrade Project
March 28-30, 2014

Executive Summary	Jennifer Fortner
1.0 Introduction	
2.0 Technical	
2.1 Hadron Calorimeter - HCAL	Dmitri Denisov* Adam Gibson Jose Repond
2.2 Silicon Pixel Detector - FPIX	Jim Brau* Kevin Einswieler Hartmut Sadrozinski
2.3 Level 1 Trigger	Eric James * Sarah Demers Jonathan Lewis
3.0 Cost and Schedule	Elmie Peoples-Evans* Jim Curley Richard Marcum
3.1 Cost	
3.2 Schedule	
4.0 ESH&Q	John E Anderson* Kathy Zappia Amber Kenney
5.0 Management	Elaine McCluskey* Marc Kaducak
6.0 Charge Questions	
6.1 Is the Project's design appropriately developed and well documented in their Technical Design Report (TDR)? Does the design satisfy the Project's performance requirements to carry out the scientific mission? Is the final design sufficiently mature so that the Project can start construction? For those elements of the design that are not finalized, has the Project shown there are no major issues that need to be addressed and that they are on a clear path to a final design?	Dmitri Denisov All
6.2 Has the Project developed a resource loaded schedule that includes the Project's scope of work and is achievable?	Jim Curley All
6.3 Does the Project have credible cost and schedule estimates? Do they include adequate scope, cost and schedule contingency?	Elmie Peoples-Evans All
6.4 Has the Project documented the Basis of Estimate (BOEs) that supports the baseline cost and schedule presented?	Elmie Peoples-Evans All

	6.5 Is the scope of work clearly defined between what is funded by DOE or NSF, and is this reflected in the cost, schedule and risk assessment presented to the committee?	Richard Marcum All
	6.6 Has the Project implemented risk management by identifying risks, performing a risk assessment (qualitative and quantitative) and developing mitigation plans?	Elaine McCluskey All
	6.7 Is CD-4 achievable with the Project's risks and within the DOE approved Total Project Cost?	Elaine McCluskey All
	6.8 Has the Project updated required project management documents per DOE Order 413.3B for CD-2/CD-3 and per the Fermilab Project Management System?	Marc Kaducak All
	6.9 Are the Project organization and staffing levels adequate to manage the work to get to CD-4?	Elaine McCluskey All
	6.10 Are the ESH&Q aspects being properly addressed?	John E Anderson All
	6.11 Does the Project's process for monthly statusing and reporting satisfy DOE and Laboratory requirements?	Marc Kaducak/ Elmie Peoples-Evans All
	6.12 Has the Project addressed the recommendations from the DOE CD-1 Review, the Director's CD-1 Review, the Independent Conceptual Design Review and the Director's Cost and the Schedule Assessment?	Marc Kaducak All
	6.13 Is the CMS Upgrade Project ready for a DOE CD-2/3 review in August?	Jennifer Fortner All

Note: * Indicates Subcommittee Lead and integrator of write-ups
Underlined names are the primary writer.