

COMMENT RESOLUTION DOCUMENT

EXTERNAL INDEPENDENT REVIEW

OF THE

**RUN IIb CDF DETECTOR PROJECT
&
RUN IIb D-ZERO DETECTOR PROJECT**

at

Fermi National Accelerator Laboratory

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Prepared for:

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Section/ Paragraph/Page	EIR/ICR Report	DOE Comment	EIR /ICR Team Response
Synopsis/ Executive Summary/Report	EIR Report	<p>It is unclear from reviewing the report's introduction whether this EIR solely addresses the CD-2 ESAAB Review readiness or if it is assessing the project's readiness for CD-1 and CD-3a as well. The scope of the EIR should be clearly stated.</p> <p>In addition, neither the Executive Summary nor the EIR Report provide a prima facie statement of opinion regarding whether or not the project is ready to proceed to CD-1/2/3a as required by the Subtask SOW paragraph 3.2.5.</p>	<p>The 3rd paragraph of section 1.1, Introduction, page 1, of the EIR report states, "This report of the EIR of the Run IIb CDF and D-Zero Detector Projects...presents findings and recommendations...[and reviews] their readiness to receive Critical Decision-2..." The fact that the review was a CD-2 review was also noted in the EIR/ICR Review Plan dated November 1. Nonetheless, the paragraph in section 2.3 of the EIR report that notes that the projects are scheduled for a combined CD-1/2/3a in December has been added to the Introduction. Further, in this section an explicit statement is now included that the EIR review was for CD-2 only.</p> <p>With regard to the readiness of the projects for CD-2, an explicit opinion of the EIR/ICR Team has been included in both the Executive Summary to the report and in the synopsis.</p>
3/3.1.1/8	EIR Report	<p>In the second recommendation related to cost escalation the noted action should be completed prior to CD-2, Approve Performance Baseline, as</p>	<p>As noted in the discussion of this observation, any error introduced by escalating to the mid point of the total project will be small, owing to the</p>



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		the result of the adjustment will directly impact the Cost Baseline being approved.	hard numbers used to generate the cost estimate and schedule. For this reason, this is an observation and not a finding. Further, it remains the view of the EIR/ICR Team that escalating to the mid point of each WBS element need not be done before CD-3, at which time there will be an update of the project baselines.
3/3.1.1/9	EIR Report	In the first recommendation related to noting cost associated with individual tasks on the baseline schedule, the recommended action would provide additional information to facilitate the performance baseline review by the CD-2 ESAAB. As such the recommended action should be completed prior to CD-2 as well.	The ICR Team examined both the cost estimates and schedules for both projects to verify that the cost code account to the lowest level is in accordance with DOE guidelines. Again, the cost estimates are very robust, and the recommendation is not made because the costs need to be re-estimated. Rather, the explicit inclusion of WBS element cost in the schedule facilitates the use of the schedule as a management tool.



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3/3.1.2/9	EIR Report	The recommendation provided requires further clarification. The expected result from the noted action is unclear.	The EIR/ICR Team believes that the recommendation is clear. The expected result might be a change in the way contingency is distributed among the various contributors to the project. As it now stands, DOE bears the entire contingency risk.
3/3.1.4/9	EIR Report	Monte Carlo simulation of cost risk is described in the Program and Project Management Practices manual as an appropriate technique for projects with a number of moderate or high risks. We believe that these projects have few moderate or high-risk elements. Furthermore, there is considerable detector construction experience within the project, providing a strong guide for the estimates of cost and schedule. Consequently, we feel that adoption of a modified "flat rate contingency" approach is most appropriate for these projects. This is the approach we have taken and is an approach supported by the guidance in the Program and Project Management Practices manual. We believe that reanalysis of our risk by Monte Carlo simulation would not provide a greater understanding of the project risk. (Fermilab comment)	In Chapter 8 (Acquisition Performance Baseline) of DOE M 413.3, <i>Program and Project Management Manual</i> , DOE recommends in that at CD-2, the baseline should be established at a high confidence level. The confidence level is generally 80 to 85 % using the Monte Carlo approach. In Chapter 9 (Risk Management), DOE recommends using the Monte Carlo simulation technique. The EIR/ICR Team recognizes that other methods might be acceptable and appropriate. However, if an alternative type analysis used, the preface/foreword of the cost estimate should contain a written explanation of the method used to develop the contingency and the reason that the particular method was selected. At the time of the review, the Team did not see any such



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			explanation or rationale, and therefore can not comment further.
3/3.1.4/9	EIR Report	Recommend replacing the words “DOE costs” in the last two sentences of the Observation statement with “TEC”, especially in light of the observation noted in section 3.1.2 and to make this write-up consistent with similar comments noted in the ICR write-up.	The wording is accurate. DOE is not bearing the burden of TEC alone. There are other financial contributors to the projects. The contingencies are about 37% of the DOE funding. However, for clarity, the word “cost” was changed to “funding.”
3/3.2.1/10	EIR Report	This observation and its related recommendation address two different issues, which should be noted separately. The first, “the addition of individual WBS element cost to the schedule”, is redundant with the last Observation and Recommendation made in Section 3.1.1. If necessary, perhaps a reference may be made to the previous comment in this section. Then appropriately, the second issue, “long lead procurements need to be indicated in the schedule”, can be separately highlighted.	The observation and accompanying recommendation have been restated for clarity, addressing only long lead procurement.



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3/3.4.2/12	EIR Report	The Recommendation provided for the noted Observation in this section does not appear to address the root problem in this situation as the IPT member responsibilities are already noted in the PEP. A recommendation related to the actual implementation of the IPT concept as discussed in the DOE Order and guidance documents should be more succinctly stated.	The EIR/ICR Team noted that the functioning of the IPT was absent in the PEP. The Team would presume that the IPT is functioning as required, owing to the excellent state of the projects. Nonetheless, the recommendation has been amended to add the clause “in accordance with DOE requirements and guidance.”

Note: Any changes made to the noted EIR report sections based on these comments should be consistently addressed in the Synopsis, Executive Summary, Appendix D (Independent Cost Review) and the Corrective Action Plan shell.

Additional editorial comments:

- 1) Page 2, first paragraph, sixth line: insert the word “of” after the word “because”.
Sentence has been corrected.
- 2) Page 12, Section 3.4.2: remove the word “is” from the Recommendation sentence.
Done.

General comments:

- 1) LOIs used were not noted in a separate appendix as required by the DOE EIR report guidelines. *The usual LOIs were not used by direction of the OECM Technical Monitor. However the Review Topics, per the approved Review Plan, have been added as Appendix E to the report.*
- 2) Similarly, a Lessons Learned/Best Practice appendix was not included in the report, although a best practice was noted on page 2 of the report. *Most recent direction from OECM was not to include a Lessons Learned/Best Practice appendix. Lessons Learned have been provided separately, when requested and best practices have been incorporated as positive observations, when appropriate.*