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To: Norbert Holtkamp

From: Tom Shea

Subject: **Close-out report of the LLRF Advisory Board**

Introduction

The following LLRF Advisory Board (LAB) members contributed to this report:
Tom Shea (ORNL, Chairman)
Curt Hovater (JLab)
Mike Thuot (LANL)
Coles Sibley (ORNL).

Assessment

Hardware: The LLRF field control module is in its second revision. Now that basic functionality has been demonstrated, the remaining issues relate primarily to production yield and reliability. The LLRF team remains on schedule as it prepares for full production. Any subtle performance issues should be uncovered during ongoing MEBT/DTL1 operations and will most likely not affect the fundamental hardware design. An initial production plan is in place and the personnel are available to carry it out.

Software, Firmware, and Integration: The current gate array code is derived from the first Berkeley system. It has been effective in all applications to date, but a code restructuring might contribute to maintainability and ease of upgrade. If the team decides to pursue this, it is a low risk activity that can be pursued in parallel with operations support. System integration is still in progress and some more software development is required to make the system operator-friendly.

Conclusion

The technical, cost, and schedule risk remaining in the LLRF system is now similar to that of other electronic subsystems within ASD. In bringing the development to this stage, the LLRF team has demonstrated that it is capable of managing the remaining risk. Therefore, with this report, the LLRF Advisory Board adjourns.