

**Decisions and Action Items following
Review of MQXFA06 Tie-Rod Deviation Request
Sept 15, 2020**

Review Indico page: <https://indico.fnal.gov/event/45623/>

Reviewers: Mike Anerella (BNL), Rodger Bossert (FNAL)

Finding and Comments:

- It appears that the rods used for all MQXFA magnets tested up to this date (MQXFAP1/P1b, MQXFAP2, MQXFA03 and MQXFA04) had the same non-conformity observed on the tie-rods of MQXFA06. MQXFAP1, MQXFAP1b and MQXFAP2 were disassembled and no evidence of issues with the tie-rods was found. Therefore, it is reasonable to accept the deviation requested for MQXFA06 tie-rods [1] in order to avoid a schedule delay, while performing in parallel a loading test on non-conforming rod samples.

Decisions:

- The deviation request [1] is approved for MQXFA06 tie-rods.
- Tie-rod samples with the non-conforming thread and the design deviation approved for A06 must be tested in order to demonstrate sufficient margin.

Action Items:

- From the vendor that made the MQXFA tie-rods procure short tie-rods of the same material and diameter with 3-inch threads. Check that the threads have the non-conformity of MQXFA06 tie-rods. Remove 1-inch thread according to MQXFA06 Deviation Request. Test these samples under load in order to demonstrate sufficient margin with respect to load in MQXFA design [2].

References:

[1] Deviation request proposal for MQXFA06 tie-rods,

<https://indico.fnal.gov/event/45623/>

[2] MQXFA Final Design Report, US-HiLumi-doc-948