



What's New for Users at the NIF...

NIF & JLF User Groups Meeting
February 10th, 2025

Dayne Fratanduono, *Acting* NIF User Office Director

Prepared by LLNL under Contract DE-AC52-07NA27344.



Outline

- Personnel changes
- Impact of scheduling changes in FY26 and beyond
- Shot RI training update
- Experimental Readiness timeline

Leadership Changes at the NIF User Office

- NIF User Office Director Kevin Fournier takes on a new assignment at NNSA, serving on the NNSA Science and Technology Council reporting to NA-10
 - Kevin has over 10 years of experience as the NIF User Office Director
 - Dayne Fratanduono is serving as the acting NIF User Office Director
 - NIF & PS is seeking applicants for the NIF User Office Director position; the job posting is available at: <https://www.llnl.gov/join-our-team/careers>
Reference #: REF7907M
- Katlyn Pico has started as the new administrative specialist for the NIF User Group





Schedule Impacts Starting in FY26

- Reduced weekly shot operations to 120 hours (4 hour reduction)
 - IOM installations require full 48 hour maintenance period
- Reduced log growth weekly average to .38, and maximum shot energy limited to 1.9 MJ through at least Q3FY25
- Midweek maintenance period: Wednesday 6:30PM – Friday 7PM
- Increased contingency time
 - Layers: +4 hours
 - Cold: +1 hour

<u>Shot Type</u>	<u>Hours</u>
Layered	15.25
Cold	12.25
WC	11.75
WS	7.75

Scheduling points of contact: [Derrick Lassle \(lassle3\)](#), [Megan Francisco \(francisco6\)](#)

Shot durations will continue to be updated based on facility data and feedback from stakeholders

FY27 Schedule Impacts

- Q1 is completely scheduled
 - FY26 rescheduling approved to use time in FY27 Q1
 - Time in Q1 will not be provided to programs for FY27 FASC scheduling
- Facility Maintenance and Repair (FM&R) periods moving in FY27
 - November 5 – 20
 - March 4 – 26
 - July 8 – 16
- Schedule impacts from FY26 will continue in FY27
 - Reduced weekly durations, midweek maintenance, reduced log growth

Scheduling points of contact: [Derrick Lasse \(lassle3\)](#), [Megan Francisco \(francisco6\)](#)

Shot RI Training: Updates and New Courses

- Added courses
 - NIF User Office and Shot RI Resources
 - Shot Planner and RevEx Review

- Establishing a more formal qualification process for new PIs
 - Called ‘Qual Card Process’
 - Overall process flow w/ signatures and final signoff
 - SME signatures only given when training demonstrates satisfactory understanding

NIF OPERATIONS QUALIFICATION CARD TRAINING PACKAGE		Course Number NP1314-OJT
Title: NIF Shot Responsible Individual (RI) Training		Functional Area: NIF-XXXXXXXX-AA
Trainee Name		Employee No.

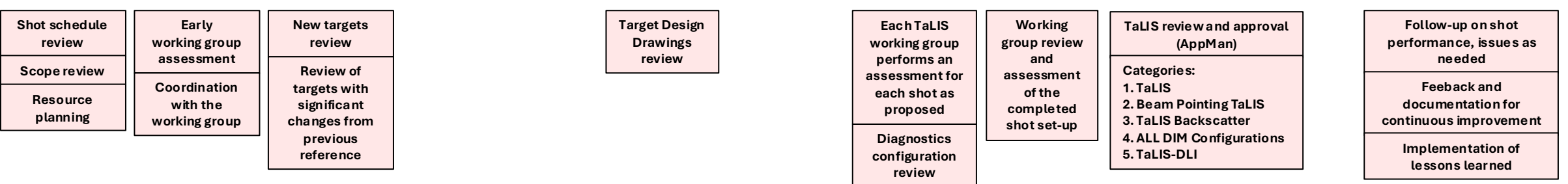
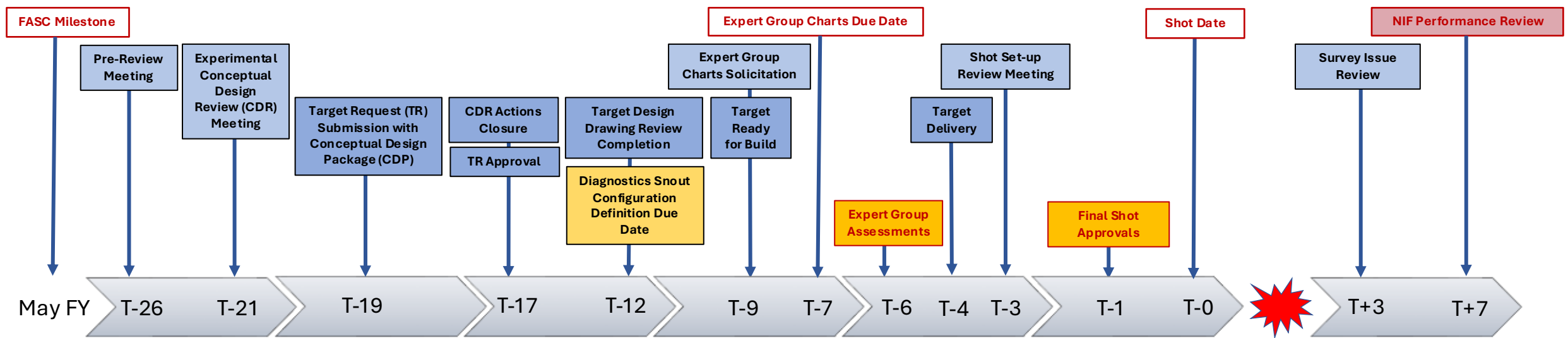
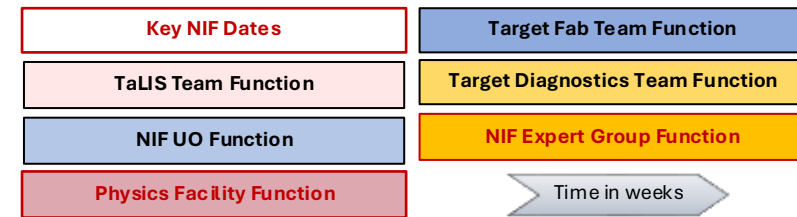
QUALIFICATION INSTRUCTIONS

This Qualification Card (Qual Card) is divided into the following sections:

NP1314-B – Introduction to Shot Setup Tool (SST), Shot Planning Tools, Visualization, and Data	2
NP1314-C – Laser Setup and Performance	3
NP1314-D – Target Fabrication Tools	4
NP1314-E – Introduction to NIF Shot Operations.....	5
NP1314-F – Introduction to Target Fielding	6
NP1314-G – Diagnostics, Factory, and Requirements Verification Process (RVP).....	7
NP1314-H – Alignment and Shot Observations.....	8
NP1314-I – NIF User Office and Shot RI Resources.....	9
NP1314-J – Shot Planner and RevEx Review	10



NIF Standard Shot Timeline



*To rely on these dates requires the expert group charts be assessed and approved within the existing envelope of known and safe configurations



Update on NIF User Group 2025 Recommendations

2025 AI 1: Long term, 5ω OTS would allow probing at substantially higher density and should remain a goal.

- An diagnostics effort is underway to develop a 4ω OTS, currently assessing its feasibility. This system would have 100x more energy than the 5ω version.

2025 AI 2: Improve process for getting access to spectroscopy data from shots.

- Trained 3 additional staff to support the transfer process.

2025 AI 3: Request to the facility to extend overall pulse shape window to allow backlighter probing $>100\text{ns}$ after the initial laser drive.

- Machine safety concerns. Requires additional analysis and resources.

Update on NIF User Group 2025 Recommendations

2025 AI 4: Access to data for crystal defects/improved simulations for when crystals are at risk to avoid having to run crystals with defects.

- Due to current resource limitations and the cost vs benefit trade space, no changes have been made to the existing practice at this time.

2025 AI 5: Request that facility streamline process for review of max credible yield memo.

- No change. The evolving risk posture associated with increasing NIF yields has led to a more conservative approach to MCY documentation, in order to better characterize risks and potential impacts.

2025 AI 6: More rapid turnaround of hGXD film scans.

- NIF is working to replace the existing PDS scanner with an Atom Scanner, planned for commissioning by the end of the fiscal year, which will reduce scan times from hours to minutes.



Update on 2025 Recommendations for the NIF

2025 AI 8: See what it would take to implement pre-fire mitigation that was partially designed for cold B-field that was stood down – do resources exist to do this for warm B-field shots?

- The facility continues to support B-field shots tactically, but no further diagnostic development at this time due to resources limitations.



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