Status and Plans for NSTX-U Recovery

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The NSTX-U device experienced a series of technical problems; the most recent of which was the failure of one of the poloidal magnetic field coils, which has rendered the device inoperable and in need of significant repair. As a result of these incidents, the Laboratory performed a very comprehensive analysis of all of the systems on NSTX-U. Through an integrated system’s analysis approach, this process identified which actions need to be taken to form a corrective action plan to ensure reliable and predictable operation. The actions required to address the deficiencies were reviewed by external experts who made recommendations on four high-level programmatic decisions regarding the inner poloidal field coils, limitations to the required bakeout temperature needed for conditioning of the vacuum vessel, divertor and wall protection tiles and coaxial helicity injection. The plans for addressing the recommendations from the external review panels will be presented. This research was sponsored by the U.S. Dept. of Energy under contract DE-AC02-09CH11466.