

Verification of item within a specified Completion Time
Discussion Topic at March 2020 Quarterly Meeting

Question from TTC instructor: There are several TS Required Actions that include **verification** ("Verify...") of something within a specified completion time. For Required Actions that involve a verification within a specific Completion Time, can entering the subsequent Condition for not meeting that Required Action be delayed until the Completion Time is reached, even if the situation being verified is currently not met?

STSB staff interpretation is that the verifications provide the safety bases for staying in that condition. If the verification is not met at any time during the recurrent CT, the plant needs to be placed in a safer condition (a more limiting condition and CT). The STSB staff would like to get the TSTF's perspective on this interpretation and how it relates to how licensees apply these verifications.

BACKGROUND/EXAMPLES FROM TTC INSTRUCTOR:

- 1) When the Completion Time is "Immediately", it is clear that if the action being verified is not met, the subsequent Condition for not meeting that Required Action is entered immediately.
 - i) A good example is BWR/4 TS 3.5.3 Action A.1 for RCIC. If HPCI is not OPERABLE, then the Required Action is not met and Condition B is entered immediately.
- 2) When the Completion Time is "Once per....", it usually is mandating some kind of on-going surveillance or parameter monitoring. If the surveillance fails or the parameter exceeds a limit, then a new Condition applies.
 - i) A clear example is BWR/4 TS 3.6.2.1, Suppression Pool temperature, Required Action A.1, *Verify suppression pool average temperature £ [110]°F Once per hour*. If SP temperature exceeds [110]°F at any time, then Condition D is entered immediately.
 - ii) Example 1.3-7 deals with this situation. It specifically states: *If after Condition A is entered, Required Action A.1 is not met within either the initial 1 hour or any subsequent 8-hour interval from the previous performance (plus the extension allowed by SR 3.0.2), Condition B is entered*. This **seems to imply** that as soon as it is determined that "the affected subsystem" is NOT isolated, Condition B is entered immediately. However, it **could mean** that as long as the RA is met "within" the time limit, Condition B would not need to be entered. I believe it's the former interpretation.
 - iii) Another specific example is BWR/4 TS 3.8.4, DC Sources, Required Action A.2. The bases states that: *Required Action A.2 requires that the battery float current be verified as less than or equal to [2] amps. This indicates that, if the battery had been discharged as the result of the inoperable battery charger, it is now fully capable of supplying the maximum expected load requirements. The [2] amp value is based on returning the battery to [95]% charge and assumes a [5]% design margin for the battery. **If at the expiration of the initial [12] hour period the battery float current is not less than or equal to [2] amps this indicates there may be additional battery problems and the battery must be declared inoperable.*** This seems to indicate that as long as the float current is less than 2 amps before 12 hours has elapsed, Condition D or E need not be entered. In other words, A.2 may not be met initially, but Condition D or E need not be entered as long as the float current is restored during the initial 12-hour completion time.
- 3) When the Completion Time is a specified duration (e.g., 4 hours), it becomes even more confusing. Here are the BWR/4 TSs of interest:

Verification of item within a specified Completion Time

Discussion Topic at March 2020 Quarterly Meeting

- i) TS 3.4.4, RCS LEAKAGE, Required Action B.2 allows 4 hours to “*Verify source of unidentified LEAKAGE increase is not service sensitive type 304 or type 316 austenitic stainless steel.*”
- ii) TS 3.5.2, RPV Water Inventory Control, RAs C.1, C.2 and C.3 allow 4 hours to verify that Secondary Containment can be established, Secondary Containment penetrations can be closed and Standby Gas Treatment can be placed in service; within the DRAIN TIME.
- iii) TS 3.7.4, Main Control Room Environmental Control (MCREC)] System, Required Action B.2 allows 24 hours to “*Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.*”
- iv) TS 3.8.6, Battery Parameters, Required Action C.2, allows 12 hours to “*Verify no evidence of (battery cell) leakage*” If Condition C is entered due to electrolyte level below the top of the plates and the licensee determines that the cell is leaking within a few minutes, can they delay entering Condition F for the full 12-hour completion time? In this case, if they enter Condition F, TS 3.8.4 would not be met and TS 3.8.4 RA B.1 to restore the battery has a 2-hour completion time. If not restored, TS 3.8.4 RA D.1 requires them to be in Mode 3 in the next 12 hours. If they could use the full 12 hours of TS 3.8.6 RA C.2, they would have a much better chance to complete some compensatory actions (e.g., jumper out the cell or replace the cell) and avoid a plant shutdown.