

**ANS Answers Inquiry on ANSI/ANS-15.4-2007, “Selection and Training of Personnel for Research Reactors” (revision of ANSI/ANS-15.4-1988 (R1999)).**  
(*Nuclear News*, April 2015)

***Inquiry:***

Is the intent that the electrocardiogram (ECG), blood and urinalysis, X-rays, and other tests be performed when the medical history and/or physical indicates the potential for one of the disqualifying conditions identified in this section, to ensure the medical condition is under satisfactory control to allow solo operation? Or is the intent to perform all these tests as screening tests to try to identify potential disqualifying conditions identified in Section 7.2.3, Disqualifying Conditions, in otherwise asymptomatic healthy individuals?

The difference between the two choices is not only cost, but the benefit (or lack of it) or risk of performing these tests in otherwise asymptomatic healthy individuals. Some providers see it necessary to conduct screening tests to rule out conditions in otherwise asymptomatic healthy individuals, this can result in false positive tests in low risk individuals and additional unnecessary medical testing, iatrogenic complications, and unnecessary stress on individuals.

I would assume the former of the two choices is the intent, i.e., that the listed tests (ECG, blood and urinalysis, X-rays, and other tests) be performed when the medical history and/or physical indicates the potential for one of the disqualifying conditions identified in this section, to ensure the medical condition is under satisfactory control to allow solo operation.

***Inquirer’s Proposed Response:***

I recommend that clarification be added to Section 7.2.3 adding an additional sentence – “If an individual’s medical history or physical examination indicate the presence of one of these disqualify conditions, the following should be considered to assess how well they are compensated for solo operation” and change “rule out” to “evaluate.” This section would then read:

“7.2.3 Disqualifying conditions

The presence of any of the following conditions, which have a high probability of sudden or unexpected incapacitation, unless adequately compensated, shall disqualify the individual for solo operation except as noted. If an individual’s medical history or physical examination indicate the presence of one of these disqualifying conditions, the following should be considered to assess how well they are compensated for solo operation: Laboratory tests such as ECG, blood and urinalysis, X-rays, and other tests should be used to evaluate disqualifying conditions identified in this section.”

***Response:***

The examining physician is not the individual that certifies to the U.S. Nuclear Regulatory Commission whether an individual is capable of solo reactor operation. That function rests with the senior research reactor management representative on site based on their review of the medical examination results. The additional tests are not mandatory but are used to screen for conditions that could incapacitate a reactor operator. The decision to order tests is at the discretion of the medical professional based on previous medical history or the initial physical examination if previous medical records are not available. The recommended clarification suggested by the inquirer does remove the confusion and will be incorporated into the next revision of this standard.