INSPECTION MANUAL CHAPTER 0609 APPENDIX I

# LICENSED OPERATOR REQUALIFICATION SIGNIFICANCE DETERMINATION PROCESS

Effective Date: xx/xx/2018

## 0609I-01 PURPOSE

The Licensed Operator Requalification Significance Determination Process (SDP) is used for determining the risk significance of findings identified during the inspection of licensed operator requalification activities and licensed operator performance.

## 0609I-02 BACKGROUND

This SDP was designed to assess the risk significance of findings associated with Inspection Procedure 71111, Attachment 11 (IP 71111.11), "Licensed Operator Requalification Program and Licensed Operator Performance" in the following areas: (1) requalification examination results, (2) biennial requalification written examinations, (3) annual requalification operating tests, (4) administration of an annual requalification operating test, (5) requalification examination security, (6) remedial training and re-examinations, and (7) the control room simulator.

In regard to conformance with operator license conditions, such as the medical fitness of licensed operators and compliance with the regulations contained in 10 CFR 55.53, traditional enforcement may result. This is consistent with current and past NRC practice. In addition, conformance with operator license conditions and other violations of 10 CFR 55 may be addressed by referring to Inspection Manual Chapter (IMC) 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria."

## 0609I-03 GUIDANCE

Figure I.1, a flowchart contained on the following pages, presents a series of yes/no decision blocks for assessing licensed operator requalification and licensed operator performance findings. Following the flowchart, a description of each flowchart block is presented.

Figure I.1 – Licensed Operator Requalification SDP Flowchart

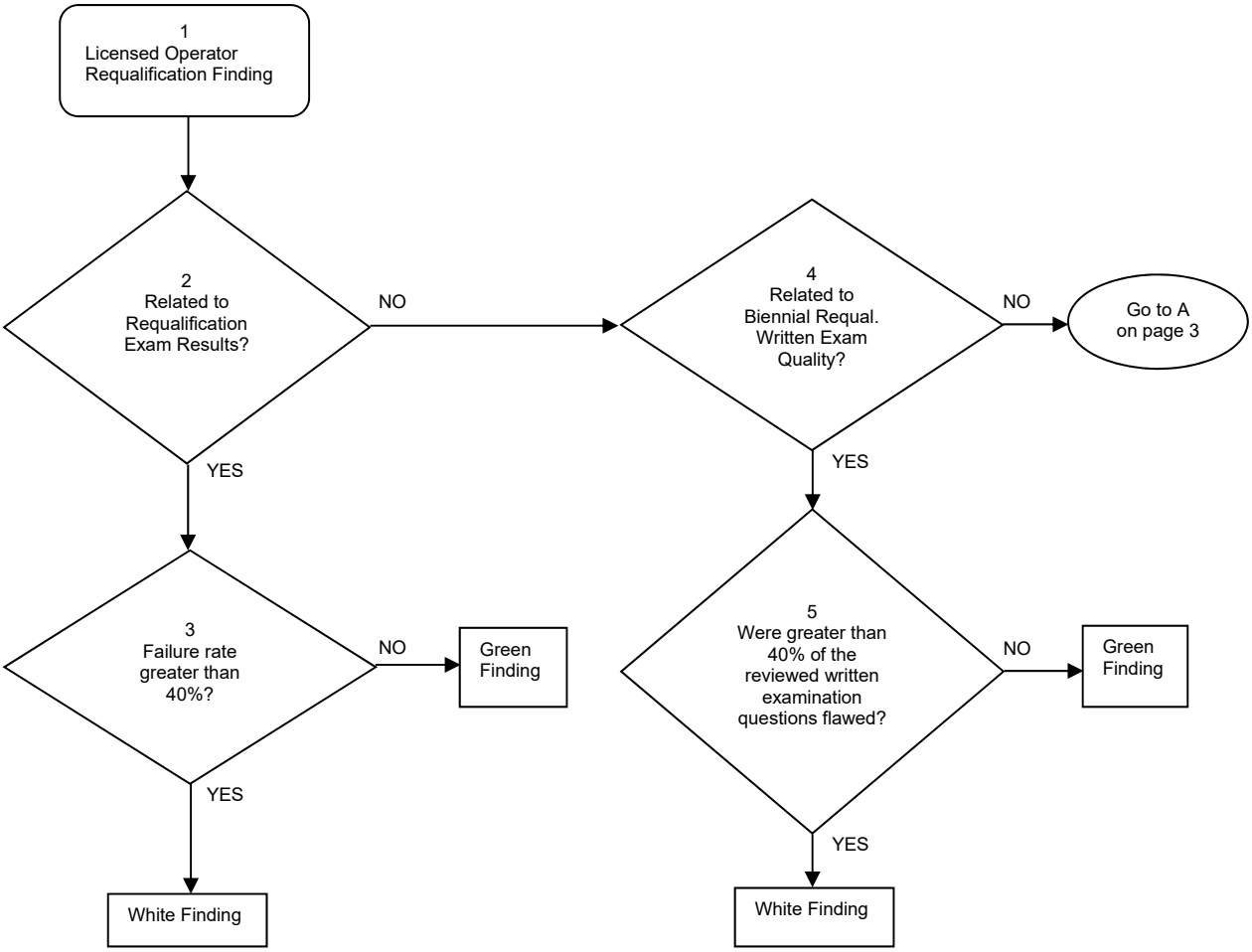


Figure I.1 – Licensed Operator Requalification SDP Flowchart (continued)

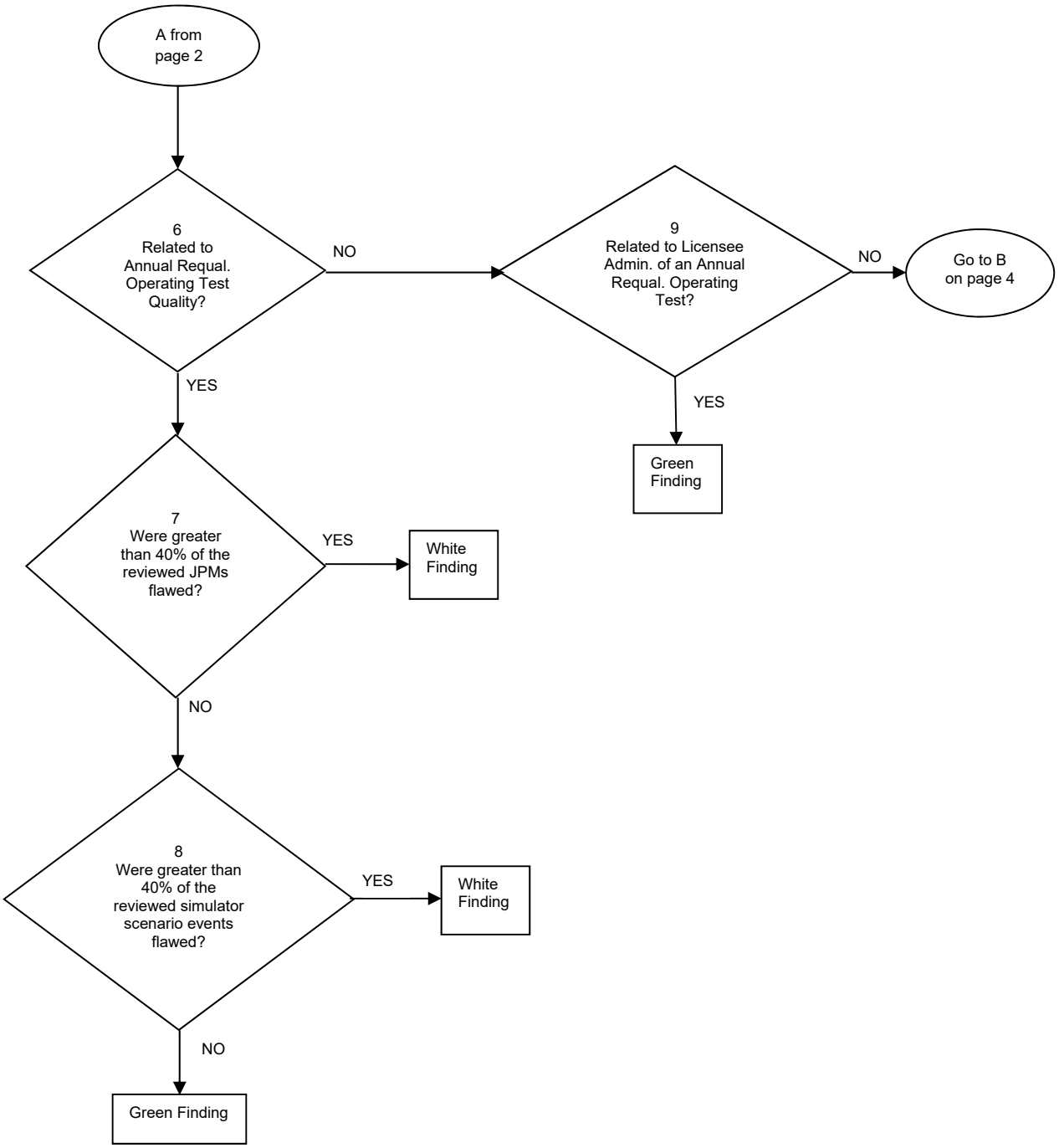


Figure I.1 – Licensed Operator Requalification SDP Flowchart (continued)

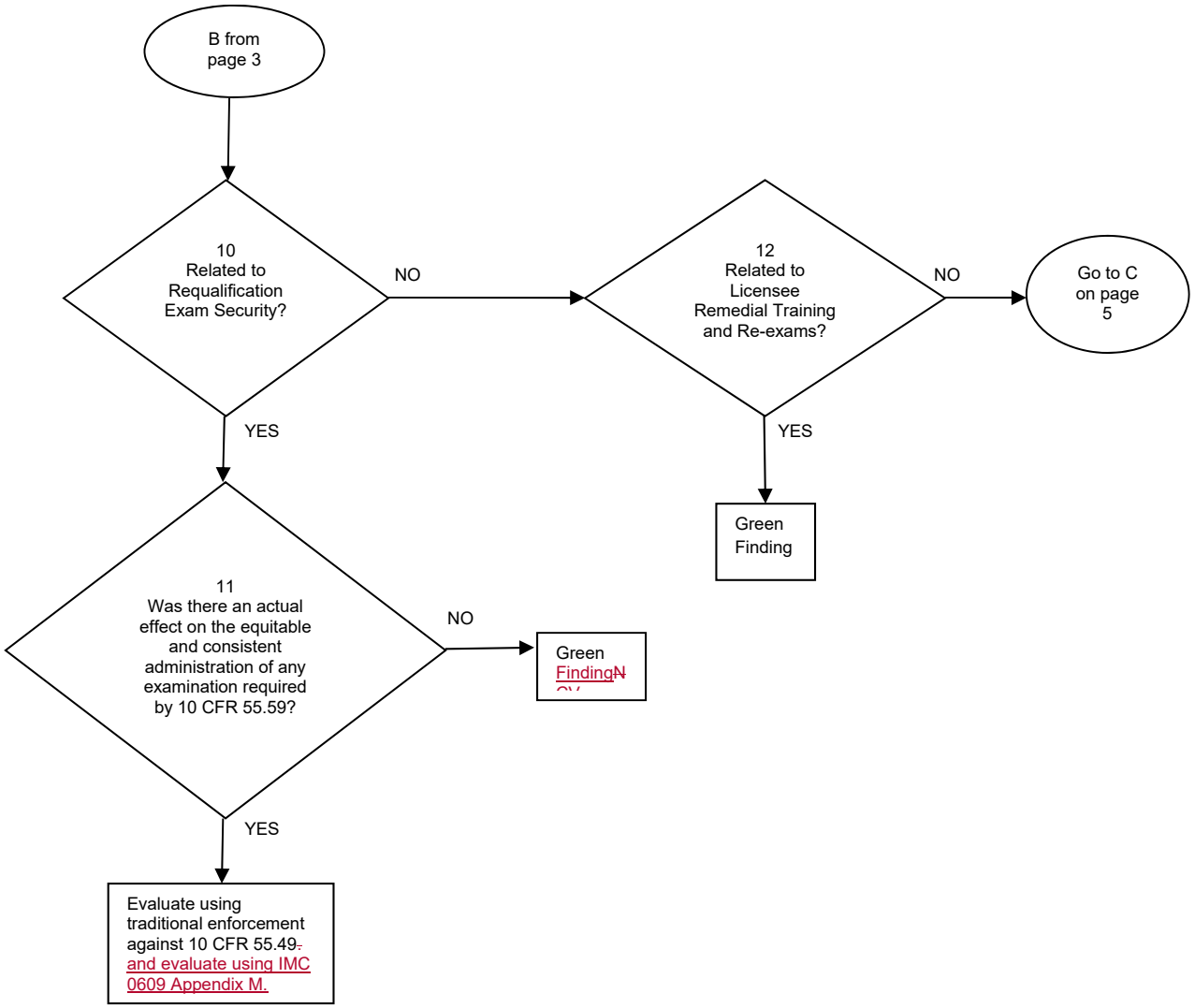
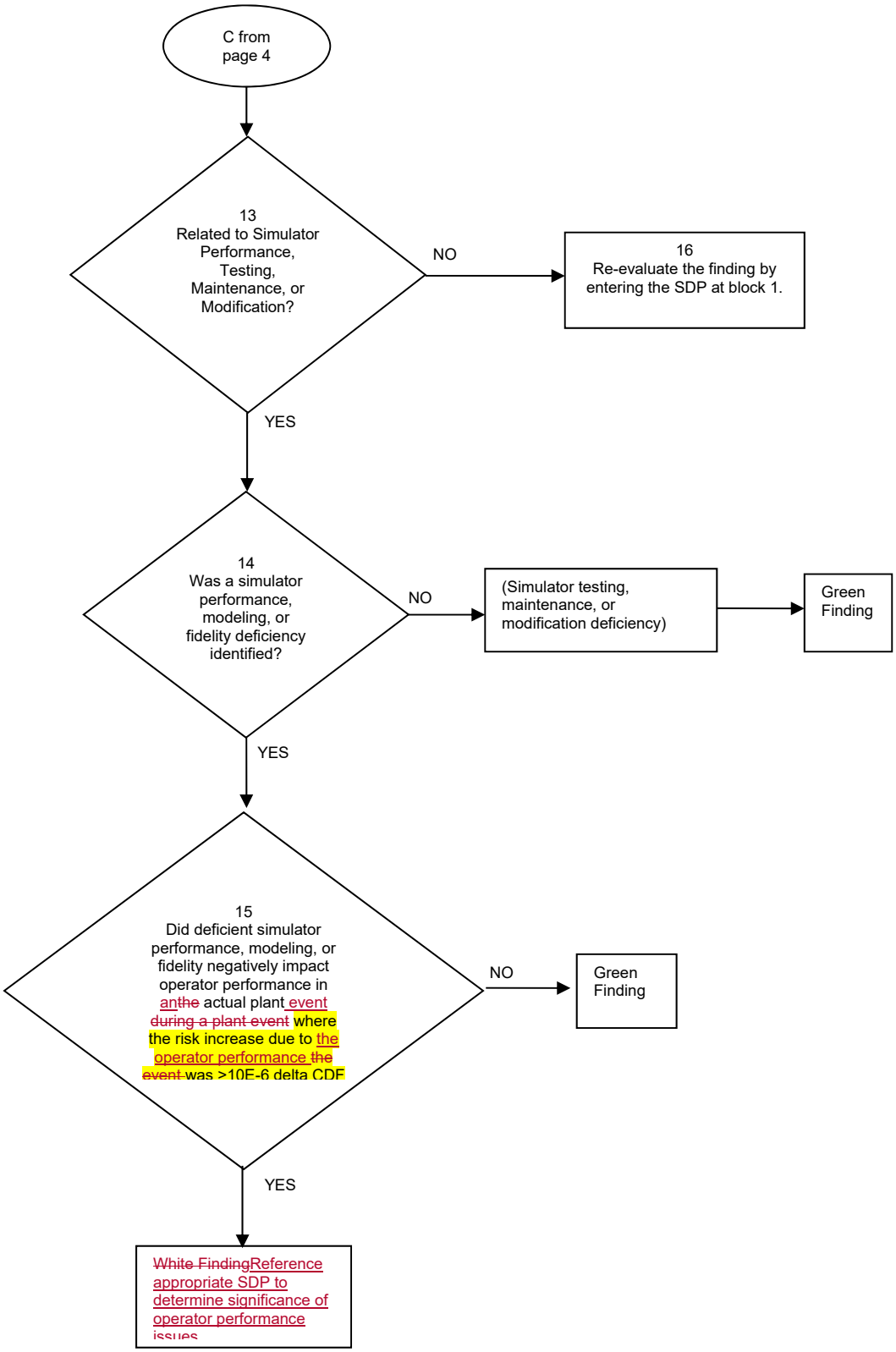


Figure I.1 – Licensed Operator Requalification SDP Flowchart (continued)



Flowchart Block Descriptions:

#1 – The SDP starts after a single licensed operator requalification finding is identified from IP 71111.11 and screened through Manual Chapter 0612, Appendix B. Each specific finding must be evaluated separately.

#2 – This is the top-level entry block associated with licensed operator performance as measured by the results of the requalification examinations required by 10 CFR 55.59(a)(2). This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.03 of IP 71111.11 and upon completing the screening of inspection issues in accordance with IMC 0612.

#3 – Based upon the requalification examination results collected at the end of the testing cycle, was the failure rate greater than 40%? This block will be answered "yes" if either:

(a) The individual examination failure rate is greater than 40% (IP 71111.11, Line 4 of Table 03.03-1), or

(b) The crew simulator scenario failure rate is greater than 40% (IP 71111.11, Line 7 of Table 03.03-1).

#4 – This is the top-level entry block associated with the quality of biennial requalification written examinations that are required by 10 CFR 55.59(a)(2). This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.04.a and Appendix B of IP 71111.11, and upon completing the screening of inspection issues in accordance with IMC 0612.

#5 – Were greater than 40% of the reviewed written examination questions flawed? In answering this question, the inspector will need to review the results from section 03.04.a and Appendix B of IP 71111.11. If the answer to this block is "yes," then a white finding results, based upon a higher percentage of flawed written examination questions used on a requalification examination required by 10 CFR 55.59(a)(2). If the answer to this block is "no," then a green finding results, based upon a lower percentage of flawed questions or other written examination deficiency.

#6 – This is the top-level entry block associated with the quality of annual requalification operating tests that are required by 10 CFR 55.59(a)(2). This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.04.b and Appendix C of IP 71111.11, and upon completing the screening of inspection issues in accordance with IMC 0612.

#7 – Were greater than 40% of the reviewed job performance measures (JPMs) flawed? In answering this question, the inspector will need to review the results from section 03.04.b and Appendix C of IP 71111.11. If the answer to this block is "yes," then a white finding results, based upon a higher percentage of flawed JPMs used on a requalification examination required by 10 CFR 55.59(a)(2).

#8 – Were greater than 40% of the reviewed simulator scenario events flawed? In answering this question, the inspector will need to review the results from section 03.04.b and Appendix C of IP 71111.11. If the answer to this block is "yes," then a white finding results, based upon a higher percentage of flawed simulator scenario events used on a requalification examination

required by 10 CFR 55.59(a)(2). If the answer to this block is "no," then a green finding results, based upon a lower percentage of flawed simulator scenario events and JPMs (checked in item #7 above), or based upon some other operating test deficiency.

#9 – This is the top-level entry block associated with the licensee's administration of annual requalification operating tests that are required by 10 CFR 55.59(a)(2). This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.04.c and Appendix D of IP 71111.11, and upon completing the screening of inspection issues in accordance with IMC 0612.

#10 – This is the top-level entry block associated with requalification examination security. This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.04.d and Appendix E of IP 71111.11, and upon completing the screening of inspection issues in accordance with IMC 0612.

#11 – Was there an actual effect on the equitable and consistent administration of any examination required by 10 CFR 55.59? In these instances, a licensed operator has gained an unfair advantage on an examination required by 10 CFR 55.59, and this condition was not corrected prior to being authorized to resume licensed duties. Use IMC 0609, Appendix M to evaluate the significance of more-than-minor performance deficiencies. These occurrences can be willful or intentional ("cheating") or unintentional. ~~Under these circumstances, t~~Traditional enforcement against 10 CFR 55.59 should also be considered when~~, since~~ the regulatory process has ~~likely~~ been impacted. Examples of gaining an unfair advantage on an examination include: (1) a licensed operator obtains unauthorized assistance during an examination, such as by receiving assistance on a test item during an examination from an unauthorized individual or by copying answers from another examinee; (2) a licensed operator obtains specific knowledge of or is exposed to requalification examination content prior to taking the requalification examination; (3) a licensed operator is used to validate requalification examination test items during exam development, and is then subsequently administered a requalification examination with any test items duplicated from those that the operator previously validated.

#12 – This is the top-level entry block associated with remedial training and re-examinations, which occurs whenever a licensed operator fails any portion of a requalification examination required by 10 CFR 55.59(a)(2). This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.04.e and Appendix F of IP 71111.11, and upon completing the screening of inspection issues in accordance with IMC 0612.

#13 – This is the top-level entry block associated with control room simulator performance, maintenance, and testing, as specified in 10 CFR 55.46. This block is answered "yes" or "no" based upon completing the specific guidance contained in section 03.04.g and Appendix G of IP 71111.11, and upon completing the screening of inspection issues in accordance with IMC 0612.

#14 – Was a simulator performance, modeling, or fidelity deficiency identified? This block is used to differentiate between deficiencies associated with simulator performance (including deficiencies with modeling or fidelity) and deficiencies associated with simulator testing, maintenance, and modification. These issues are treated slightly differently in the SDP, due to the potential for unrealistic operator training due to deficient simulator performance. If this block is answered "no", the deficiency is associated with simulator testing, maintenance, or

modification (as verified in the next block), and results in a green finding. If this block is answered “yes”, proceed to block 15.

#15 – Did deficient simulator performance, modeling, or fidelity negatively impact operator performance in the actual plant during a plant event? The concern with this block is that the simulator provided un-realistic or negative training to licensed operators (due to deficiencies in simulator performance, modeling, or fidelity), and that this un-realistic simulator training negatively impacted operator performance during an event. Reference appropriate SDP guidance (At-Power, Shutdown, or others) to determine if the negative operator performance resulted in a risk increase of greater than 10E-6 delta CDF or greater than 10E-7 delta LERF. Qualitative SDP results may also be used to determine if the risk increase is greater than green. If the answer to this block is “yes”, then this results in a ~~white~~ finding with significance commensurate with the risk increase due to the negative operator performance, based upon the appropriate SDP guidance. ~~deficient simulator performance affecting licensed operator performance during a plant event of NRC concern.~~ If the answer to this block is “no”, then this results in a green finding, since deficient simulator performance was still identified.

#16 – Re-evaluate the finding by entering the SDP at block 1. The SDP is arranged as a *series* of top-level entry blocks, and block #16 should not occur unless all the entry blocks have been answered “NO”. If this is the case, re-evaluate the finding and enter the SDP at block #1, in case an error was made.

ATTACHMENT 1 - Revision History – IMC 0609, Appendix I

| Commitment Tracking Number | Accession Number Issue Date Change Notice | Description of Change | Description of Training Required and Completion Date | Comment Resolution and Closed Feedback Form Accession Numbers (Pre-Decisional, Non-Public Information) |
|---|---|---|---|---|
| N/A | ML021060448<br>03/27/2002<br>CN 02-011 | Revised the description of the flow chart blocks to: 1) incorporate the first year's lessons learned, 2) reflect the change to 10 CFR 55.46 (Simulator Rule), and 3) align with 10 CFR 55.49 (integrity of examinations and tests). | None | N/A |
| N/A | ML0524300990<br>8/22/2005<br>CN 05-023 | Revised to match current revision to IP 71111.11 (Operator Requalification) and to fix several flaws that have been identified and will enhance the flowchart and matrix. | None | N/A |
| N/A | ML113270313<br>12/06/11<br>CN 11-040 | Complete re-write of document. Arranged flowchart to mirror inspection areas of revised IP 71111.11, removed all minor finding blocks (minor findings should be screened out prior to reaching the SDP), and simplified examination results logic. | Training held by teleconference with Regional examiners on 11/30/11 | ML113250576 |
| | ML18257A059<br>DRAFT | Made public to solicit industry comments | | |
| N/A | ML18178A571x<br>x/xx/18<br>CN 18-xxx | Reformatted and streamlined to reflect revision to IMC0040. Added guidance to refer to IMC 0609 Appendix M in certain instances. Tied white finding for simulators to the delta CDF and delta LERF of the actual plant event. | None | ML18177A421<br><br>Closed FF:<br>0609I-1849<br>ML18178A205<br>0609I-2232<br>ML18178A225<br>0609I-2160<br>ML18178A232<br>0609I-2309<br>ML18178A260 |