



TS/RG 1.33 v. Appendix B, Criterion V

Coordinated Regional (Reactor)
Weekly KM/Training Seminars





Question

- Is it better to cite violations of procedures as a violation of Appendix B, Criterion V, or Technical Specifications (TSS) and Regulatory Guide (RG) 1.33?
- Answer: It depends.



Part 50 Appendix B

- The requirements of Appendix B apply to all activities affecting the safety-related functions of structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.



Criterion V - Instructions, Procedures, and Drawings

Activities **affecting quality** shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.



Guidance Documents and Procedures

- Failure to comply with a Regulatory Guide (RG), in general, is not a violation, nor is it automatically a violation when a licensee fails to comply with its own procedures.
- However, the failure to comply with a RG or a licensee procedure may be a violation if the RG or licensee procedure is connected to a statute, a regulation, a Technical Specification, a license condition, or an NRC order.



Standard Technical Specifications

ADMINISTRATIVE CONTROLS

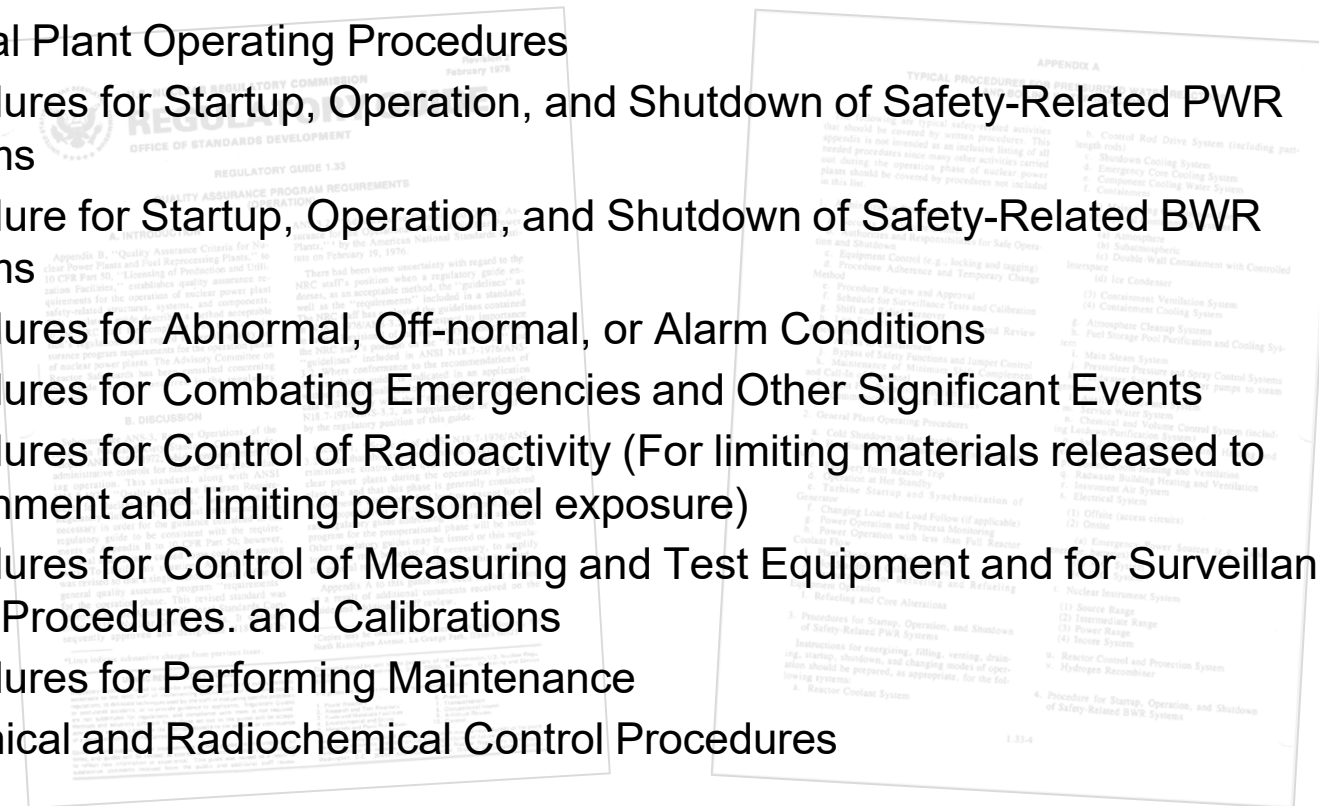
4. Procedures

1. **Written procedures shall be established, implemented, and maintained covering the following activities:**
 - a. **The applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978,**
 - b. The emergency operating procedures required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in [Generic Letter 82-33],
 - c. Quality assurance for effluent and environmental monitoring,
 - d. Fire Protection Program implementation, and
 - e. All programs specified in Specification 5.5.



Regulatory Guide 1.33, Appendix A

1. Administrative Procedures
2. General Plant Operating Procedures
3. Procedures for Startup, Operation, and Shutdown of Safety-Related PWR Systems
4. Procedure for Startup, Operation, and Shutdown of Safety-Related BWR Systems
5. Procedures for Abnormal, Off-normal, or Alarm Conditions
6. Procedures for Combating Emergencies and Other Significant Events
7. Procedures for Control of Radioactivity (For limiting materials released to environment and limiting personnel exposure)
8. Procedures for Control of Measuring and Test Equipment and for Surveillance Tests, Procedures, and Calibrations
9. Procedures for Performing Maintenance
10. Chemical and Radiochemical Control Procedures





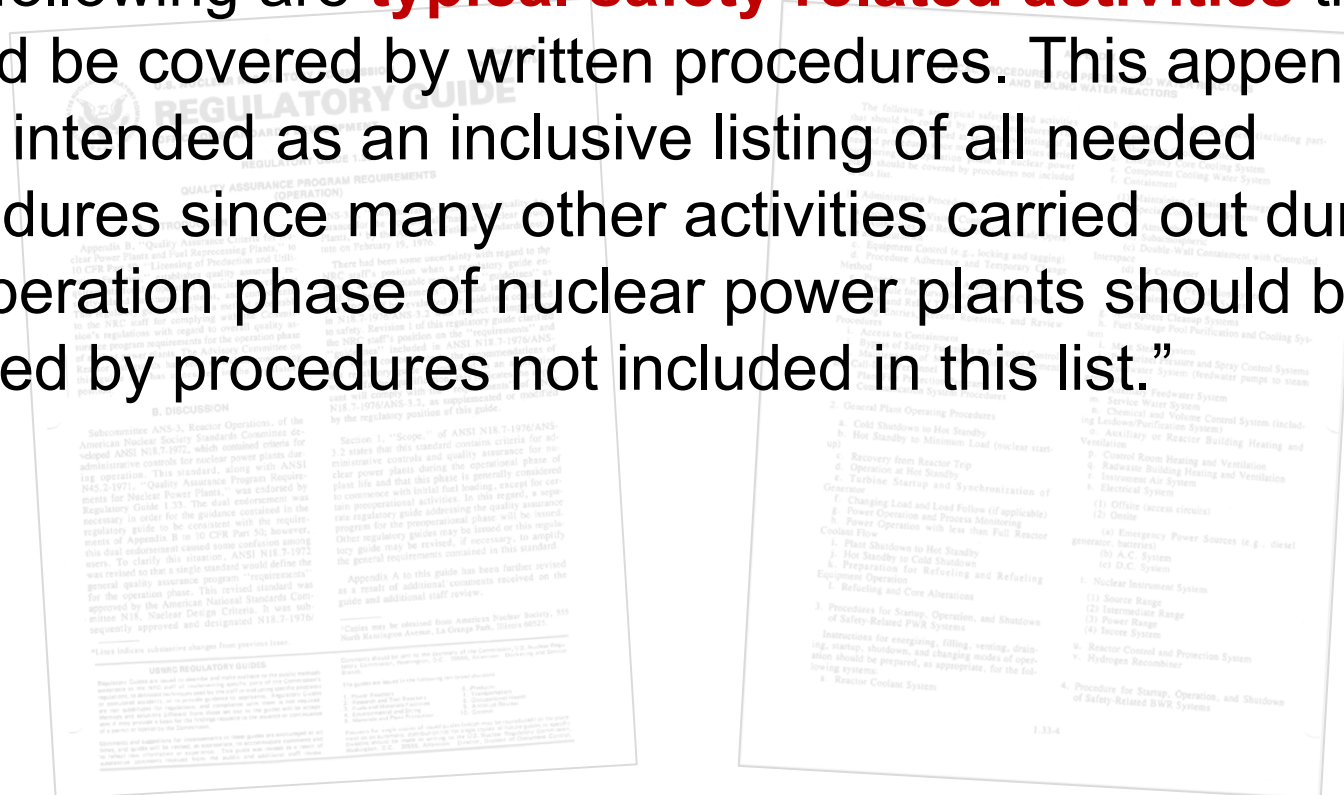
Administrative Procedures

- a. Security and Visitor Control
- b. Authorities and Responsibilities for Safe Operation and Shutdown
- c. Equipment Control (e.g., locking and tagging)
- d. Procedure Adherence and Temporary Change Method
- e. Procedure Review and Approval
- f. Schedule for Surveillance Tests and Calibration
- g. Shift and Relief Turnover
- h. Log Entries, Record Retention, and Review Procedures
- i. Access to Containment
- j. Bypass of Safety Functions and Jumper Control
- k. Maintenance of Minimum Shift Complement and Call-In of Personnel
- l. Plant Fire Protection Program
- m. Communication System Procedures



Regulatory Guide 1.33, Appendix A

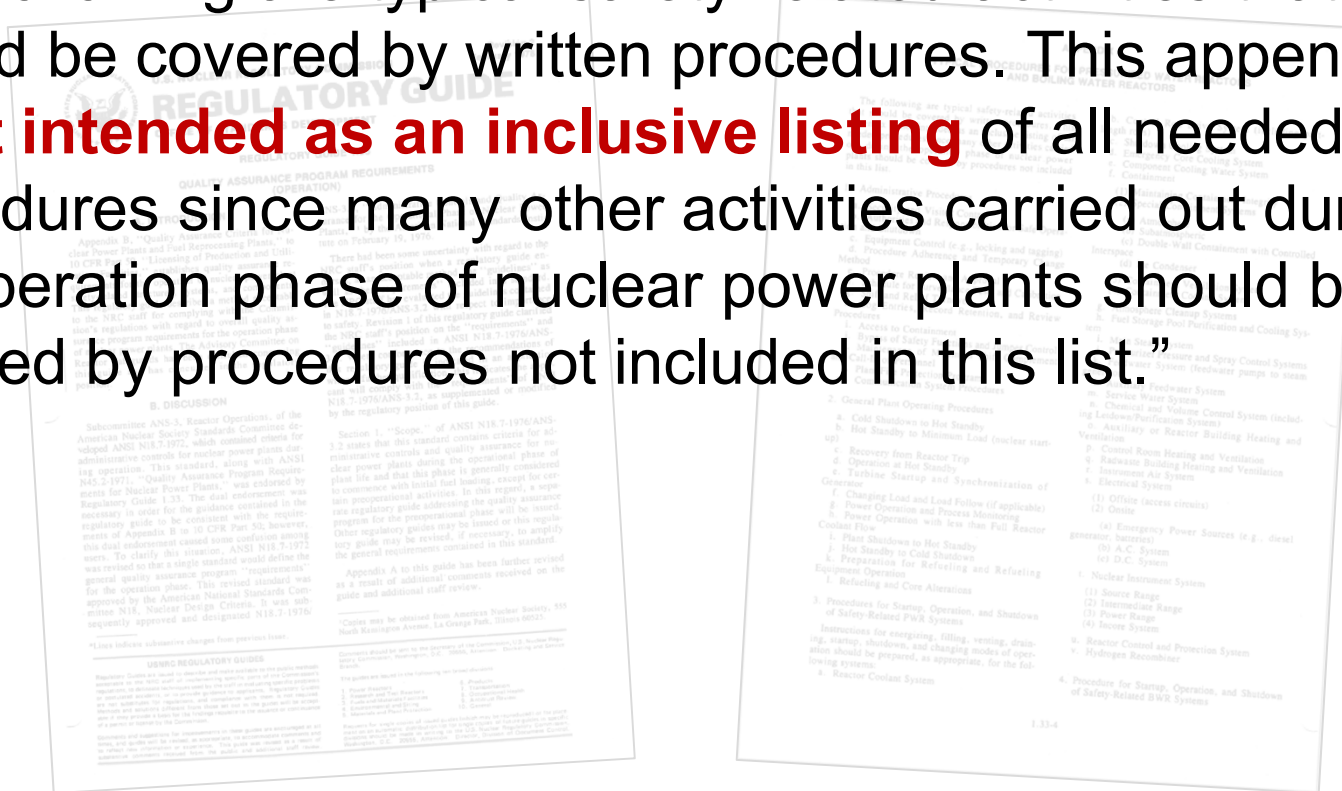
“The following are **typical safety-related activities** that should be covered by written procedures. This appendix is not intended as an inclusive listing of all needed procedures since many other activities carried out during the operation phase of nuclear power plants should be covered by procedures not included in this list.”





Regulatory Guide 1.33, Appendix A

“The following are typical safety-related activities that should be covered by written procedures. This appendix is **not intended as an inclusive listing** of all needed procedures since many other activities carried out during the operation phase of nuclear power plants should be covered by procedures not included in this list.”





Part 50 Appendix B Violations

- General Rule: Where the TS administrative requirements may encompass certain Appendix B requirements such as procedures, the TS, **if more specific**, should be cited.
- Use of Appendix B Crit V for the citation could be more appropriate if:
 - SSCs are clearly impacted (affected) – e.g. a maintenance procedure on an Appendix B SSC; and
 - broader corrective action is appropriate.



Criterion V Violation Example

- A. 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures and Drawings,” states, in part, that **activities affecting quality** shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Quality Procedure EN-MH-1234, “Materials Handling,” Section 15.1, states that the use of temporary hoisting assemblies shall be supported by detailed drawings, specifications, evaluations, and/or certifications. . .

Quality Procedure EN-MH-2345, “Materials Handling Program,” states that the licensee shall perform a load test in all configurations for which the temporary hoisting assembly would be used. . .

Criterion V Violation Example

Contrary to the above, on March 31, 2013, the licensee did not accomplish the Unit 1 main turbine generator stator lift and move, **an activity affecting quality**, as prescribed by documented instructions and procedures.

Specifically:

1. The licensee approved a design for the temporary hoisting assembly that was not supported by detailed drawings, specifications, evaluations, and/or certifications. The licensee failed to identify the load deficiencies in vendor Calculation 27619-C1, "Heavy Lift Gantry Calculation,"
2. The licensee failed to perform a load test in all configurations for which the temporary hoisting assembly would be used. As a result, on March 31, 2013, while lifting and transferring the Unit 1 main turbine generator stator, the temporary overhead crane collapsed causing the 525-ton stator to fall on and extensively damage portions of the plant, affecting safety-related equipment.

Same Example Using TS 5.4.1 and RG 1.33

- A. **TS 5.4.1** requires, in part, that written procedures shall be established and implemented in accordance with the applicable procedures recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.

RG 1.33, Revision 2, Appendix A, February 1978, states, in part, that “maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.”

Quality Procedure EN-MH-1234, “Materials Handling,” Section 15.1, states that the use of temporary hoisting assemblies shall be supported by detailed drawings, specifications, evaluations, and/or certifications. . .

Quality Procedure EN-MH-2345, “Materials Handling Program,” states that the licensee shall perform a load test in all configurations for which the temporary hoisting assembly would be used. . .



Appendix B, Criterion V

Example #2

B 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” requires, in part, that activities affecting quality . . . shall be accomplished in accordance with these instructions.

Procedure STA-421, “Initiation of Condition Reports,” . . . required, in part, that equipment malfunctions, damage, or degradation, other than anticipated wear will be documented in a condition report..

Contrary to the above, on . . . , the licensee performed an activity affecting quality and failed to accomplish the activity in accordance with the instructions. Specifically, the licensee did not initiate a condition report for an under-frequency relay with an as-found setpoint outside the tolerance band.

Thoughts: The activity affecting quality arguably was the surveillance that failed, not the failure to initiate a CR. Better path likely TS and RG 1.33



Take-Aways

- No hard and fast rule
- What is easier to defend?
- If the failure to follow the procedure describing the activity affects quality of a safety-related structure, system or component, citing Criterion V is acceptable.
- In some cases, it may be easier to defend violations of TS 5.4.1 and RG 1.33 because the requirements are more broadly written, and TS 1.33 provides specific examples where procedures are required for certain safety-related activities.
 - Particularly true if the procedure is not marked as quality related.

References

- See Enforcement Manual Part II, Section 2.1.5, Citations Against 10 CFR Part 50, Appendix B



Discussion