

**Reliability Standard Audit Worksheet[[1]](#footnote-1)**

# TOP-002-4 – Operations Planning

This section to be completed by the Compliance Enforcement Authority.

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| **Audit ID:** | Audit ID if available; or REG-NCRnnnnn-YYYYMMDD |
| **Registered Entity:** | Registered name of entity being audited |
| **NCR Number:** | NCRnnnnn |
| **Compliance Enforcement Authority:** | Region or NERC performing audit |
| **Compliance Assessment Date(s)[[2]](#footnote-2):** | Month DD, YYYY, to Month DD, YYYY |
| **Compliance Monitoring Method:** | [On-site Audit | Off-site Audit | Spot Check] |
| **Names of Auditors:** | Supplied by CEA |

# Applicability of Requirements

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|  | **BA** | **DP** | **GO** | **GOP** | **IA** | **LSE** | **PA** | **PSE** | **RC** | **RP** | **RSG** | **TO** | **TOP** | **TP** | **TSP** |
| **R1** |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| **R2** |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| **R3** |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| **R4** | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **R5** | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **R6** |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| **R7** | X |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Legend:**

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| Text with blue background: | Fixed text – do not edit |
| Text entry area with Green background: | Entity-supplied information |
| Text entry area with white background: | Auditor-supplied information |

Findings

(This section to be completed by the Compliance Enforcement Authority)

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| **Req.** | **Finding** | **Summary and Documentation** | **Functions Monitored** |
| **R1** |  |  |  |
| **R2** |  |  |  |
| **R3** |  |  |  |
| **R4** |  |  |  |
| **R5** |  |  |  |
| **R6** |  |  |  |
| **R7** |  |  |  |

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| **Req.** | **Areas of Concern** |
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| **Req.** | **Recommendations** |
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| **Req.** | **Positive Observations** |
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Subject Matter Experts

Identify the Subject Matter Expert(s) responsible for this Reliability Standard.

**Registered Entity Response (Required; Insert additional rows if needed):**

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| **SME Name** | **Title** | **Organization** | **Requirement(s)** |
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1. Supporting Evidence and Documentation
2. Each Transmission Operator shall have an Operational Planning Analysis that will allow it to assess whether its planned operations for the next day within its Transmission Operator Area will exceed any of its System Operating Limits (SOLs).
3. Each Transmission Operator shall have evidence of a completed Operational Planning Analysis. Such evidence could include but is not limited to dated power flow study results.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested[[3]](#endnote-1):

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Dated power flow study results. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
| **File Name** | **Document Title** | **Revision or Version** | **Document Date** | **Relevant Page(s) or Section(s)** | **Description of Applicability of Document** |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R1

This section to be completed by the Compliance Enforcement Authority

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|  | (R1) Review documentary evidence that demonstrates that the entity has Operational Planning Analyses that will allow it to assess whether its planned operations for the next day within its TOP Area will exceed any of its SOLs. |
| **Note to Auditor:**  See the definition of Operational Planning Analysis below to ensure all components have been included. | |

Auditor Notes:

1. Supporting Evidence and Documentation
2. Each Transmission Operator shall have an Operating Plan(s) for next-day operations to address potential System Operating Limit (SOL) exceedances identified as a result of its Operational Planning Analysis as required in Requirement R1.
3. Each Transmission Operator shall have evidence that it has an Operating Plan to address potential System Operating Limits (SOLs) identified as a result of the Operational Planning Analysis performed in Requirement R1. Such evidence could include but it is not limited to plans for precluding operating in excess of each SOL that was identified as a result of the Operational Planning Analysis.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requestedi:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Plans as noted in Measure M2. |
| Operational Planning Analyses results. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
| **File Name** | **Document Title** | **Revision or Version** | **Document Date** | **Relevant Page(s) or Section(s)** | **Description of Applicability of Document** |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R2

This section to be completed by the Compliance Enforcement Authority

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|  | (R2) Review evidence demonstrating that the entity’s Operating Plan addressed potential SOLs that were identified as a result of the Operational Planning Analysis it performed in Requirement R1. |
| **Note to Auditor:** | |

Auditor Notes:

1. Supporting Evidence and Documentation
2. Each Transmission Operator shall notify entities identified in the Operating Plan(s) cited in Requirement R2 as to their role in those plan(s).
3. Each Transmission Operator shall have evidence that it notified entities identified in the Operating Plan(s) cited in Requirement R2 as to their role in the plan(s). Such evidence could include but is not limited to dated operator logs, or e-mail records.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested i:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Dated operator logs, email, correspondence, or other evidence, that demonstrates that the entity notified entities identified in the Operating Plan(s) cited in Requirement R2 as to their role in those plan(s). |
| Operating Plan(s) for next-day operations per Requirement R2. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
| **File Name** | **Document Title** | **Revision or Version** | **Document Date** | **Relevant Page(s) or Section(s)** | **Description of Applicability of Document** |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R3

This section to be completed by the Compliance Enforcement Authority

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|  | (R3) Review logs or correspondence that demonstrates that the entity notified entities identified in the Operating Plan(s) cited in Requirement R2 as to their role in those plan(s). |
| **Note to Auditor:** | |

Auditor Notes:

1. Supporting Evidence and Documentation
2. Each Balancing Authority shall have an Operating Plan(s) for the next-day that addresses:
   1. Expected generation resource commitment and dispatch
   2. Interchange scheduling
   3. Demand patterns
   4. Capacity and energy reserve requirements, including deliverability capability
3. Each Balancing Authority shall have evidence that it has developed a plan to operate within the criteria identified. Such evidence could include but is not limited to dated operator logs or e-mail records.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested i:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Entity’s Operating Plan(s) for the next-day. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
| **File Name** | **Document Title** | **Revision or Version** | **Document Date** | **Relevant Page(s) or Section(s)** | **Description of Applicability of Document** |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R4

***This section to be completed by the Compliance Enforcement Authority***

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|  | (R4) Review the Operating Plan(s) for the next-day and ensure that it addresses: |
|  | (Part 4.1) expected generation resource commitment and dispatch. |
|  | (Part 4.2) Interchange scheduling. |
|  | (Part 4.3) demand patterns. |
|  | (Part 4.4) capacity and energy reserve requirements, including deliverability capability. |
| **Note to Auditor:** | |

Auditor Notes:

1. Supporting Evidence and Documentation
2. Each Balancing Authority shall notify entities identified in the Operating Plan(s) cited in Requirement R4 as to their role in those plan(s).
3. Each Balancing Authority shall have evidence that it notified entities identified in the plan(s) cited in Requirement R4 as to their role in the plan(s). Such evidence could include but is not limited to dated operator logs or e-mail records.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested i:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Dated operator logs or e-mail correspondence that demonstrates that the entity notified entities identified in the Operating Plan(s) cited in Requirement R4 as to their role in those plan(s). |
| Entity’s Operating Plan(s) for the next-day. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
| **File Name** | **Document Title** | **Revision or Version** | **Document Date** | **Relevant Page(s) or Section(s)** | **Description of Applicability of Document** |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R5

This section to be completed by the Compliance Enforcement Authority

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|  | (R5) Review logs or correspondence that demonstrates that the entity notified entities identified in the Operating Plan(s) cited in Requirement R4 as to their role in those plan(s). |
| **Note to Auditor:** | |

Auditor Notes:

1. Supporting Evidence and Documentation
2. Each Transmission Operator shall provide its Operating Plan(s) for next-day operations identified in Requirement R2 to its Reliability Coordinator.
3. Each Transmission Operator shall have evidence that it provided its Operating Plan(s) for next-day operations identified in Requirement R2 to its Reliability Coordinator. Such evidence could include but is not limited to dated operator logs or e-mail records.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested i:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Dated operator logs or e-mail correspondence that demonstrates that the entity provided its Operating Plan(s) for next-day operations identified in Requirement R2 to its Reliability Coordinator. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R6

This section to be completed by the Compliance Enforcement Authority

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|  | (R6) Review correspondence that demonstrates that the entity provided its Operating Plan(s) for next-day operations identified in Requirement R2 to its Reliability Coordinator. |
| **Note to Auditor:** | |

Auditor Notes:

1. Supporting Evidence and Documentation
2. Each Balancing Authority shall provide its Operating Plan(s) for next-day operations identified in Requirement R4 to its Reliability Coordinator.
3. Each Balancing Authority shall have evidence that it provided its Operating Plan(s) for next-day operations identified in Requirement R4 to its Reliability Coordinator. Such evidence could include but is not limited to dated operator logs or e-mail records.

**Compliance Narrative (Required):**

Provide a brief explanation, in your own words, of how you comply with this Requirement. References to supplied evidence, including links to the appropriate page, are recommended.

Evidence Requested i:

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| **Provide the following evidence, or other evidence to demonstrate compliance.** |
| Correspondence that demonstrates that the entity provided its Operating Plan(s) for next-day operations identified in Requirement R4 to its Reliability Coordinator. |

Registered Entity Evidence (Required):

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| **The following information is requested for each document submitted as evidence. Also, evidence submitted should be highlighted and bookmarked, as appropriate, to identify the exact location where evidence of compliance may be found.** | | | | | |
| **File Name** | **Document Title** | **Revision or Version** | **Document Date** | **Relevant Page(s) or Section(s)** | **Description of Applicability of Document** |
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Audit Team Evidence Reviewed (This section to be completed by the Compliance Enforcement Authority):

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Compliance Assessment Approach Specific to TOP-002-4, R7

This section to be completed by the Compliance Enforcement Authority

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|  | (R7) Review logs or correspondence that demonstrates that the entity provided its Operating Plan(s) for next-day operations identified in Requirement R4 to its Reliability Coordinator. |
| **Note to Auditor:** | |

Auditor Notes:

Additional Information:

Reliability Standard



The full text of FAC-011-3 may be found on the NERC Web Site (www.nerc.com) under “Program Areas & Departments”, “Reliability Standards.”

In addition to the Reliability Standard, there is an applicable Implementation Plan available on the NERC Web Site.

Regulatory Language

[*Transmission Operations Reliability Standards and Interconnection Reliability Operations and Coordination Reliability Standards,* Final Rule, Order No. 817, 153 FERC ¶ 61,178 (2015).](http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/Order%20No.%20817%20Approving%20TOP%20IRO%20Reliability%20Standards.pdf)

5. The Commission approved the initial TOP and IRO Reliability Standards in Order No. 693. On April 16, 2013, in Docket No. RM13-14-000, NERC submitted for Commission approval three revised TOP Reliability Standards to replace the eight currently-effective TOP standards.8 Additionally, on April 16, 2013, in Docket No. RM13-15-000, NERC submitted for Commission approval four revised IRO Reliability Standards to replace six currently-effective IRO Reliability Standards. On November 21, 2013, the Commission issued the Remand NOPR in which the Commission expressed concern that NERC had “removed critical reliability aspects that are included in the currently-effective standards without adequately addressing these aspects in the proposed standards.” The Commission identified two main concerns and asked for clarification and comment on a number of other issues. Among other things, the Commission expressed concern that the proposed TOP Reliability Standards did not require transmission operators to plan and operate within all SOLs, which is a requirement in the currently-effective standards. In addition, the Commission expressed concern that the proposed IRO Reliability Standards did not require outage coordination.

13. Pursuant to section 215(d) of the FPA, we adopt our NOPR proposal and approve NERC’s revisions to the TOP and IRO Reliability Standards, including the associated definitions, violation risk factors, violation severity levels, and implementation plans, as just, reasonable, not unduly discriminatory or preferential and in the public interest.

14. We also determine that the proposed TOP and IRO Reliability Standards should improve reliability by defining an appropriate division of responsibilities between reliability coordinators and transmission operators.

17. Furthermore, the revised definitions of operational planning analysis and real-time assessment are critical components of the proposed TOP and IRO Reliability Standards and, together with the definitions of SOLs, IROLs and operating plans, work to ensure that reliability coordinators, transmission operators and balancing authorities plan and operate the bulk electric system within all SOLs and IROLs to prevent instability, uncontrolled separation, or cascading. In addition, the revised definitions of operational planning analysis and real-time assessment address other concerns raised in the Remand NOPR as well as multiple recommendations in the 2011 Southwest Outage Blackout Report.

19. However, as we discuss below we direct NERC to modify the standards to include transmission operator monitoring of non-BES facilities, and to specify that data exchange capabilities include redundancy and diverse routing; as well as testing of the alternate or less frequently used data exchange capability, within 18 months of the effective date of this Final Rule.

58. We believe that proposed Reliability Standards TOP-002-4 and IRO-008-2 along with NERC’s definition of reliability coordinator address NIPSCO’s concern. Although the transmission operator and balancing authority develop their own operating plans for next-day operations, both the transmission operator and balancing authority notify entities identified in the operating plans as to their role in those plans. Further, each transmission operator and balancing authority must provide its operating plan for next-day operations to its reliability coordinator. In Reliability Standard IRO-008-2, Requirement R2, the reliability coordinator must have a coordinated operating plan for next-day operations to address potential SOL and IROL exceedances while considering the operating plans for the next-day provided by its transmission operators and balancing authorities. Also, Reliability Standard IRO-008-2, Requirement R3 requires that the reliability coordinator notify impacted entities identified in its operating plan as to their role in such plan. Based on the notification and coordination processes of Reliability Standards TOP-002-4 (for the transmission operator and balancing authority) and IRO-008-2 (for the reliability coordinator) for next-day operating plans, as well as the fact that the reliability coordinator is the entity that is the highest level of authority who is responsible for the reliable operation of the bulk electric system, we believe that the reliability coordinator has the authority and necessary next-day operational information to resolve any next-day operational issues within its reliability coordinator area.

Selected Glossary Terms

Operational Planning Analyses: An evaluation of projected system conditions to assess anticipated (pre-Contingency) and potential (post-Contingency) conditions for next-day operations. The evaluation shall reflect applicable inputs including, but not limited to, load forecasts; generation output levels; Interchange; known Protection System and Special Protection System status or degradation; Transmission outages; generator outages; Facility Ratings; and identified phase angle and equipment limitations. (Operational Planning Analysis may be provided through internal systems or through third-party services.)

Revision History for RSAW

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| **Version** | **Date** | **Reviewers** | **Revision Description** |
| 1 | 6/20/2014 | Initial Posting | New Document |
| 2 | 8/29/2014 | NERC Compliance, NERC Standards, RSAWTF | Revisions for updated standard language and comments received during comment period. |
| 3 | 1/20/2017 | NERC Compliance Assurance, RSAW Task Force | Revisions for comments received during second comment period. |

1. NERC developed this Reliability Standard Audit Worksheet (RSAW) language in order to facilitate NERC’s and the Regional Entities’ assessment of a registered entity’s compliance with this Reliability Standard. The NERC RSAW language is written to specific versions of each NERC Reliability Standard. Entities using this RSAW should choose the version of the RSAW applicable to the Reliability Standard being assessed. While the information included in this RSAW provides some of the methodology that NERC has elected to use to assess compliance with the requirements of the Reliability Standard, this document should not be treated as a substitute for the Reliability Standard or viewed as additional Reliability Standard requirements. In all cases, the Regional Entity should rely on the language contained in the Reliability Standard itself, and not on the language contained in this RSAW, to determine compliance with the Reliability Standard. NERC’s Reliability Standards can be found on NERC’s website. Additionally, NERC Reliability Standards are updated frequently, and this RSAW may not necessarily be updated with the same frequency. Therefore, it is imperative that entities treat this RSAW as a reference document only, and not as a substitute or replacement for the Reliability Standard. It is the responsibility of the registered entity to verify its compliance with the latest approved version of the Reliability Standards, by the applicable governmental authority, relevant to its registration status.

   The NERC RSAW language contained within this document provides a non‑exclusive list, for informational purposes only, of examples of the types of evidence a registered entity may produce or may be asked to produce to demonstrate compliance with the Reliability Standard. A registered entity’s adherence to the examples contained within this RSAW does not necessarily constitute compliance with the applicable Reliability Standard, and NERC and the Regional Entity using this RSAW reserves the right to request additional evidence from the registered entity that is not included in this RSAW. Additionally, this RSAW includes excerpts from FERC Orders and other regulatory references. The FERC Order cites are provided for ease of reference only, and this document does not necessarily include all applicable Order provisions. In the event of a discrepancy between FERC Orders, and the language included in this document, FERC Orders shall prevail. [↑](#footnote-ref-1)
2. Compliance Assessment Date(s): The date(s) the actual compliance assessment (on-site audit, off-site spot check, etc.) occurs. [↑](#footnote-ref-2)
3. Items in the Evidence Requested section are suggested evidence that may, but will not necessarily, demonstrate compliance. These items are not mandatory and other forms and types of evidence may be submitted at the entity’s discretion. [↑](#endnote-ref-1)