Special Processes Institute

QUALITY AUDITING & VERIFICATION GUIDEBOOK

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Contents and How to Use This Guide

This guidebook is a practical working reference for people who plan, prepare, conduct, support, report, respond to or improve quality audits and related verification activities. It covers internal auditing, supplier auditing, product and production-process auditing, special process surveillance, test witnessing, source inspection, document review and focused quality requirement reviews.

PART A – FOUNDATIONS

1. Introduction

Purpose

Quality auditing provides confidence that defined arrangements are suitable, implemented and effective. A good audit is not a paperwork hunt and it is not an attempt to catch people out. It is a disciplined, impartial and evidence-based examination of requirements, processes, records, products and behaviours to determine the extent to which audit criteria are fulfilled.

The strongest audits do two things at the same time: they establish conformity against defined criteria and they reveal useful information about process effectiveness, risk, control and opportunities to improve.

> **CORE PRINCIPLE: Audit the process as it actually operates, compare objective evidence with defined criteria, and reach conclusions that can be defended by evidence.**

Authoritative Framework

ISO 19011:2026 is the principal international guidance standard for auditing management systems. It provides guidance on auditing principles, management of audit programmes, conducting audits, reporting and auditor competence. The 2026 edition also reflects increased use of technology, digitisation, virtual environments and risk analysis.

ISO 9001 Auditing Practices Group (APG) papers provide additional practical guidance on topics such as audit planning, checklists, evidence collection, documenting and closing nonconformities, audit reports, remote audits, processes, internal audit and external providers. APG papers are guidance rather than auditable requirements.

For aviation, space and defence, IAQG 9101 standardises QMS audit and reporting requirements for certification activities. Internal and supplier audits should not automatically copy certification-body classifications or rules unless the organisation or contract has deliberately adopted them.

Principles of Auditing

Principle	Practical meaning
Integrity	Act honestly, ethically and professionally.
Fair presentation	Report truthfully, accurately and without concealing significant matters.
Due professional care	Apply diligence, judgement and competence appropriate to the risk and significance.
Confidentiality	Protect information obtained during the audit.
Independence	Remain sufficiently free from bias or responsibility for the activity being audited.
Evidence-based approach	Base conclusions on verifiable evidence and appropriate sampling.
Risk-based approach	Focus audit effort on matters that can most affect audit objectives and organisational outcomes.

What an Audit Is – and Is Not

An effective audit IS	An effective audit IS NOT
A structured comparison of evidence against criteria	A personal opinion about how the auditor would run the process
A sample-based assessment	Proof that every item in the population conforms
A test of implementation and effectiveness	Only a document review
A professional conversation supported by observation and records	An interrogation
A mechanism for confidence and improvement	A blame exercise
A defined activity with scope and criteria	An unlimited search for problems

2. Types of Audits

First-, Second- and Third-Party Audits

Type	Typical description	Focus
First-party	Internal audit performed by or on behalf of the organisation itself.	QMS, process, product, compliance and effectiveness audits.
Second-party	Audit of an external provider/supplier by a customer or interested party.	Supplier approval, surveillance, performance recovery and special process oversight.
Third-party	Independent certification/accreditation audit.	Useful context but governed by the applicable certification/accreditation scheme.

Internal QMS Auditing

Internal auditing should evaluate whether the QMS conforms to the organisation's own requirements and applicable QMS requirements, and whether it is effectively implemented and maintained. ISO 9001 requires an audit programme that considers process importance, changes and previous audit results. A mature programme therefore does not simply audit every clause once per year with equal effort.

- Use process performance, risk, customer feedback, nonconformity trends and organisational change to prioritise audit effort.
- Audit process interactions, not only individual clauses.
- Include effectiveness: ask whether the process achieves its intended result, not merely whether a procedure exists.
- Maintain auditor objectivity and impartiality.

Supplier / External-Provider Auditing

Supplier audits are second-party assurance activities. They can support supplier selection, approval, surveillance, development, recovery, special process approval, change assessment or verification of corrective action. Scope should be driven by the reason for the audit and the risk of the supplied product, process or service.

Typical trigger	Possible audit response
New supplier / new site	Capability and QMS approval audit
Poor quality performance	Focused process / product / RCCA effectiveness audit
New special process	Technical approval / validation surveillance
Repeated escapes	Process trail from planning through final release
Major process or location change	Change-impact and re-approval audit
Long-aged corrective actions	Corrective-action effectiveness verification
Customer / contract requirement	Defined second-party surveillance activity

3. Quality Verification Activities

Not every quality verification activity needs to be called an audit. Selecting the correct assurance method helps avoid unnecessary formality while ensuring the activity has a clear objective, scope, evidence requirement and output.

Activity	Primary purpose	Typical output
Document Review Verification	Verify documentation accuracy, completeness, approval, revision and requirement alignment.	Review record / comments / approval / FAIR review
Quality Management System Audit	Evaluate QMS processes against ISO 9001, AS9100, organisational QMS and other criteria.	Audit report and findings
Product Audit	Focused examination of a product or batch, including identity, characteristics, material and record traceability.	Product audit record
Production Process Audit	Evaluate production against instructions, specifications, control plans, first article inspection report and process requirements.	Process audit report or production readiness review (PRR)
Special Processes Surveillance Audit	Formal surveillance/approval activity focused on qualification, validation, revalidation and continued process control.	Approval/surveillance report and actions
Test Witnessing	Observe test, calibration or validation setup and execution against controlled requirements.	Witness record
Verification at Source / Source Inspection	Verify product, certification and end-item data pack before release/shipment.	Source inspection/release record
Quality Requirement Review	Focused on-site review of products, processes, contract review or requirements; less formal than a full audit but may create actions.	Review minutes/action log or contract review
Corrective Action Verification	Confirm correction, root cause, implementation and effectiveness of corrective action.	Closure/effectiveness record
Configuration Verification	Confirm product/document configuration and change status.	Configuration verification record

SELECTION RULE: Choose the least burdensome activity that can credibly achieve the assurance objective. Do not turn every visit into a full QMS audit.

4. Audit Programme Management

Audit Programme versus Audit Plan

An audit programme is the managed set of audits over a period. An audit plan is the arrangement for one specific audit. Confusing the two often produces annual schedules with little connection to risk or business need.

Risk-Based Programme Planning

Input	Questions to ask
Process criticality	Could failure affect safety, conformity, delivery, regulatory compliance or customer confidence?
Performance	Are escapes, defects, QNs/NCRs, complaints or rework increasing?
Change	Has the process, product, equipment, site, organisation or supplier changed?
Previous audits	Were significant findings raised? Are actions sustained?
Special processes	Is output difficult to verify later? Are validation controls critical?
Supplier risk	Is the supplier sole-source, high-value, high-complexity or performance-sensitive?

Example Audit Programme Fields

Field	Example
Audit ID	AUD-26-014
Area / Supplier	Final Inspection / Example Supplier Ltd
Reason	Annual risk-based surveillance
Risk	High
Type	Production process + product audit
Scope	Final inspection and release for Product Family X
Criteria	PO, drawing, inspection procedure, QMS process, applicable AS9100 requirements
Lead Auditor	A. Auditor
Planned date	15 Oct 2026
Status	Planned
Findings / closure	To be completed

5. Roles, Responsibilities and Competence

Role	Typical responsibility
Audit Programme Manager	Defines programme objectives, resources, competence, risk and monitoring.
Lead Auditor	Plans the audit, manages the team, communicates with auditee and controls conclusions/report.
Auditor	Collects and evaluates evidence, records objective evidence and contributes findings.
Technical Specialist / SME	Provides specialist knowledge; supports technical evaluation without replacing auditor responsibility.
Auditee / Process Owner	Provides access, explains the process, supports evidence collection and owns agreed actions.
Corrective Action Owner	Implements correction/root-cause/corrective action and provides closure evidence.
Independent Reviewer	Reviews report/findings where organisational governance requires.

Auditor Competence

- Audit principles, methods and evidence evaluation.
- Applicable QMS and contractual requirements.
- Process and product knowledge appropriate to the audit.
- Special process technical knowledge where relevant.
- Interviewing, listening and communication.
- Sampling and audit-trail techniques.
- Nonconformity writing and report writing.
- Digital-system and remote-audit capability where relevant.
- Professional judgement, impartiality and confidentiality.

SPECIALIST SUPPORT: For technically complex activities, use a competent audit team. A lead auditor does not need to be the deepest technical expert if suitable technical specialists are included and roles are clear.

PART B – PLANNING AND PREPARATION

6. The Audit Lifecycle

Stage	Output
1. Need identified	Audit objective / trigger
2. Scope and criteria defined	Audit brief
3. Auditor/team selected	Competent and impartial team
4. Audit notified	Formal request / notification
5. Information requested	Pre-audit document pack. May include a request for self assessment
6. Document review and risk analysis	Audit trails and sampling plan
7. Checklist / working documents prepared	Structured audit aid
8. Opening meeting	Shared understanding
9. Audit conducted	Objective evidence
10. Findings consolidated	Conformities, NCs, OFIs, strengths
11. Closing meeting	Findings understood and actions/timelines established and agreed
12. Report issued	Controlled audit record
13. Corrective action and verification	Evidence of implementation/effectiveness
14. Closure and learning	Closed findings and programme feedback

7. Audit Notification and Request

Give reasonable notice unless the audit objective requires an unannounced activity. Supplier audits should normally be coordinated through the appropriate commercial/supplier-quality route and should respect contractual access rights, security, export-control and confidentiality requirements.

Audit Notification Content

- Reason and objective for the audit.
- Proposed date, duration and location / remote arrangements.
- Scope and boundaries.
- Audit criteria and key contractual references.
- Audit team and technical specialists.
- Requested auditee attendees and process owners.
- Documents/data requested in advance. May include a self assessment with pre-supplied checklist(s).
- Site-access, PPE, security, photography and IT requirements.
- Expected opening/closing meetings.
- Expected reporting and corrective-action process.

Example Notification

Element	Example wording
Objective	Verify effective implementation of production and final inspection controls for Product Family X following increased QN activity.
Scope	From release of production planning through manufacture, inspection, product release and associated records at the Cambridge facility.
Criteria	PO requirements, drawing/specification, QP-07, WI-14, applicable QMS requirements and approved special process requirements.
Pre-audit data	Current procedures, process flow, last 12 months QNs, calibration list, training matrix, previous audit actions, self assessment completed checklist(s).
Output	Audit report including objective evidence, findings and agreed action dates.

8. Defining Scope, Objectives and Criteria

Audit Objective

The objective explains why the audit is being performed and what decision or assurance need it supports. Examples include supplier approval, verification of QMS implementation, investigation of repeated escapes, special process reapproval or confirmation of corrective-action effectiveness.

Audit Scope

The scope defines the boundaries: site, department, product family, process stages, shifts, time period and interfaces. A vague scope such as “audit manufacturing” encourages scope drift.

> **GOOD SCOPE: Production and inspection controls for Product Family X at Site A, from released manufacturing planning through final inspection and release, including outsourced heat treatment and associated traceability.**

Audit Criteria

Criteria are the requirements against which evidence is evaluated. They can include standards, QMS procedures, specifications, drawings, purchase orders, contracts, control plans, process instructions, regulatory requirements and customer-specific requirements.

> **KEY DISTINCTION: Scope tells you what is inside the audit. Criteria tell you what requirements the evidence will be compared against.**

9. Pre-Audit Document Review

Pre-audit review should help the auditor understand the process, identify risk and build audit trails. It should not become a remote audit of every document before arriving on site.

Information	What to look for
Process map / procedure	Sequence, ownership, controls, interfaces and records
Previous audit reports	Repeat findings, weak closure, unresolved risk
Performance data	Defects, escapes, delivery, scrap, QN ageing, customer complaints
Training / competence	Critical roles, expired qualifications, new starters
Calibration / equipment	Critical equipment, overdue items, OOT history
NCR / QN / concessions	Recurring failure modes and effectiveness of RCCA
PO / contract / drawing	Flow-down, special requirements and configuration
PFMEA / control plan	High-risk characteristics and prevention/detection controls
Special process approvals	Scope, validity, validation and revalidation status
Self-assessment checklist(s)	Checklist is complete, current and supported by objective evidence where applicable

10. Audit Agenda

One-Day Example

Time	Activity
09:00	Opening meeting: introductions, objective, scope, criteria, safety, confidentiality, agenda
09:15	QMS/document review and previous actions
10:00	Process audit / shop-floor trail
12:00	Auditor consolidation / lunch
13:00	Product and record sampling / traceability
14:30	Follow-up evidence and interviews
15:15	Auditor team consolidation and finding preparation
15:45	Closing meeting: conclusions, findings, action ownership and dates
16:15	Finish

Multi-Day Audit Considerations

- Plan daily team reviews so evidence gaps are identified before the final day.
- Allow time to revisit processes and verify contradictory evidence.

- Do not overload the closing meeting with findings that were never discussed during the audit.
- For supplier audits, include reasonable time for management response and commercial/technical interfaces.

11. Checklist Creation and Use

A checklist is a working aid, not a script. It helps ensure planned criteria are covered, but the auditor must follow evidence and audit trails when important issues emerge.

Recommended Checklist Fields

No.	Audit question	Requirement / criteria	YES	NO	N/A	Objective evidence / notes
1	Are released work instructions available at point of use?	QP-04 §5.2 / ISO 9001 documented information control				
2	Are operators competent for the operation performed?	Training procedure TR-01				
3	Are product acceptance gauges within calibration?	Inspection WI-14 / calibration procedure				

Result Convention

Result	Meaning
YES	Objective evidence demonstrates the stated requirement is fulfilled for the sample examined.
NO	Objective evidence demonstrates a requirement is not fulfilled. Assess and document the applicable nonconformity.
N/A	The requirement genuinely does not apply within the defined scope.
OFI	Prefer recording separately from YES/NO. An OFI should not be used to downgrade a real nonconformity.

Writing Unambiguous Questions

Weak question	Improved question
Is calibration controlled?	Are monitoring and measuring resources identified, within required calibration/verification status, and suitable for the measurement performed?
Is training OK?	Can the organisation demonstrate that personnel performing Operation 40 are competent against defined competence requirements?
Are suppliers approved?	Are external providers selected and controlled in accordance with defined approval criteria before purchase orders are placed?

CHECKLIST RULE: Write questions so that YES consistently means conformity, NO consistently means nonconformity, and N/A consistently means the criterion does not apply. Avoid reversed or negatively phrased questions.

12. Sampling Strategy

Audits are normally sample-based. The auditor should choose samples deliberately enough to support the audit objective while recognising that a conforming sample does not prove universal conformity.

Method	Use
Judgemental / risk-based	Select high-risk, recent, changed, failed or unusual examples.
Random	Reduce deliberate selection bias when a broad population exists.
Stratified	Sample across shifts, machines, operators, products, suppliers or time periods.
Vertical / trace audit	Follow one product/order from requirement through planning, manufacture, inspection and release.
Reverse trace	Start with finished product and trace back to material, process, inspection and source records.
Thematic	Follow one control such as calibration, competence or configuration across several processes.

PART C – CONDUCTING THE AUDIT

13. Opening Meeting

- Introduce audit team and auditee representatives.
- Confirm objective, scope, criteria and boundaries.
- Confirm agenda, guides, working hours and facilities.
- Confirm confidentiality, security, export-control and photography restrictions.

- Explain sampling and that the audit cannot examine every record.
- Explain finding categories and reporting route.
- Confirm communication route for urgent safety/product-conformity concerns.
- Invite questions and identify any changed circumstances.

14. Evidence Collection

Objective evidence can be qualitative or quantitative. It should be relevant to the criteria and sufficiently reliable to support the conclusion. Evidence can include records, observations, measurements, system data and statements of fact that can be verified.

Evidence source	Examples	Auditor approach
Documents	Procedures, drawings, specifications, purchase orders	Verify revision, approval, applicability and point-of-use control.
Records	Inspection results, FAIRs, travellers, calibration, training	Check identity, date, traceability, completeness and authenticity.
Physical observation	Material identification, segregation, equipment condition	Observe actual practice rather than relying only on explanation.
Digital systems	ERP/MES/QMS transactions, revision history, electronic approvals	Confirm data source, permissions, timestamps and configuration where relevant.
Interviews	Operator/process-owner explanations and statements	Record relevant statements and corroborate significant points where practicable.
Measurements/tests	Witnessed values, test setup, instrument status	Verify method, acceptance criteria, equipment and traceability.

EVIDENCE CHAIN: Requirement → what the organisation says it does → what is observed → what records prove it → conclusion.

15. Interviewing and Questioning

Useful Question Types

Type	Examples
Open	“Show me how this job is released.” “What happens next?”
Probing	“What happens if the result is out of tolerance?”
Evidence-seeking	“Can you show me the record for that check?”
Confirmation	“So the latest instruction is obtained from the MES at start of job - is that correct?”
Trace	“Which material lot was used for this serial number?”
Effectiveness	“How do you know this corrective action prevented recurrence?”

Interview Good Practice

- Speak to people who actually perform the work, not only managers.
- Ask one clear question at a time.
- Allow silence; do not answer the question for the auditee.
- Distinguish lack of confidence in an interview from evidence of nonconformity.
- Avoid accusatory language and leading questions.
- Verify important statements with records or observation where practicable.

16. Process Auditing and Audit Trails

Process auditing follows the work and its interactions. Instead of asking “show me clause 8.5”, follow an actual order or product and evaluate requirements at the points where they matter.

The SAY–DO–PROVE Method

Element	Question
SAY	What do the controlled arrangements say should happen?
DO	What actually happens in practice?
PROVE	What objective evidence demonstrates that it happened and achieved the required result?

Example Audit Trail

Customer requirement → contract review → planning → purchase order → incoming material → manufacturing operation → special process → inspection → nonconformance control → final release → delivery records.

Follow the Evidence

If a sampled calibration record reveals an out-of-tolerance condition, the audit trail may legitimately move into impact assessment, affected product, corrective action and equipment-control processes. This is not “going off checklist”; it is following relevant evidence within the audit objective and scope.

17. Product Audit

A product audit examines whether a particular product or batch conforms to defined requirements and whether the associated evidence is traceable and credible.

- Confirm part number, revision, serial/lot and configuration.
- Review material identity and certification.
- Sample dimensional/attribute characteristics.
- Verify special process evidence and approved sources where required.
- Verify inspection/test records and equipment status.
- Review concessions/nonconformances and authorised disposition.
- Check marking, preservation, packaging and release documentation.
- Trace the product backwards through manufacturing records where useful.

18. Production Process Audit

A production process audit evaluates whether production is being performed under controlled conditions and in accordance with predetermined instructions, standards and process controls. This can form part of the production readiness review (PRR).

Area	Audit prompts
Planning	Is the process flow diagram, PFMEA, control plan, route/work instruction released and available?
Personnel	Are operators competent/qualified for the work?
Equipment	Is equipment suitable, maintained and controlled?
Material	Is identity, condition and shelf life controlled?
Parameters	Are defined process parameters set, monitored and recorded?
Inspection	Are acceptance criteria and methods clear and capable?
Nonconformance	Is suspect product identified, segregated and controlled?
Change	Are programme/tool/process changes authorised and validated where required?
Traceability	Can product be linked to material, process, operator and inspection records as required?

19. Special Process Surveillance Audit

Special process surveillance requires deeper technical attention because conformity cannot always be fully verified by subsequent product inspection. The audit should establish that the process has been appropriately qualified/validated, remains within its validated state and is revalidated when required.

Control area	Typical evidence
Process definition	Specification, procedure, technique sheet, work instruction
Validation / qualification	Qualification records, approved parameters, trials, coupons, capability evidence
Personnel	Operator / inspector qualification and continuity where required
Equipment	Qualification, maintenance, calibration, furnace surveys or process-specific controls
Materials / consumables	Specification, batch, shelf life, storage and issue control
Parameters	Recorded actual values, alarms, limits and reaction plans
Environment	Temperature, humidity, cleanliness or other required conditions
Change control	Assessment of changes that may invalidate qualification
Revalidation	Defined interval/trigger and evidence of timely revalidation / periodic testing
Product evidence	Traceable certificate, traveller, test results and acceptance records

SPECIAL PROCESS PRINCIPLE: Do not stop at "the supplier is approved". Verify that the specific process scope, equipment, personnel, parameters, material and product evidence form a valid chain for the work being audited. Process validation and revalidation / periodic testing evidence is key to conformity.

20. Test Witnessing

Test witnessing is a focused verification activity. The witness should confirm the controlled test method, configuration of the test item, setup, environmental conditions where relevant, equipment calibration, acceptance criteria, actual results and any deviations from the approved method.

- Confirm test procedure and revision before test start.
- Confirm test article identity/configuration.
- Verify equipment identity and calibration status.
- Observe setup against the procedure; record significant setup details.
- Confirm required preconditions are met.
- Record actual results or reference the controlled test report.
- Ensure failures or interruptions are controlled rather than informally reset or repeated without traceability.
- Record witness name, date, location and conclusion.

21. Verification at Source / Source Inspection

Source inspection is normally a product-release verification performed at the supplier before shipment. It should not be confused with a full QMS audit.

- Verify PO and current product configuration.
- Verify product identity, quantity and release status.
- Sample required characteristics and inspection records.
- Review material and special process certification.
- Review concessions/deviations and customer approvals.
- Review end-item data pack where applicable.
- Confirm preservation, packaging, marking and shipping requirements.
- Document acceptance/rejection and any shipment hold conditions clearly.

22. Quality Requirement Review

A Quality Requirement Review is a focused, less-formal activity used to clarify or verify particular requirements, products, processes or contracts. It can include joint contract reviews with suppliers. It may produce findings and actions, but its purpose and governance should be clear so it is not confused with a formal QMS audit. Can also be a joint contract review activity.

GOOD PRACTICE: Issue concise minutes identifying requirements reviewed, evidence seen, decisions, actions, owners and dates. If evidence demonstrates a contractual or QMS nonconformity, use the organisation's normal nonconformance/escalation route rather than hiding it as an informal note.

23. Remote and Hybrid Auditing

Remote methods can support document review, interviews, screen sharing, ERP demonstrations and some live process observation. They may be inappropriate where physical condition, environment, product handling, restricted data or process detail cannot be credibly assessed remotely.

Suitable remote activity	Potential limitation
Document/record review	Authenticity/context may require additional verification.
ERP/QMS screen sharing	Auditor sees what is presented; system access/navigation may be constrained.
Interviews	Reduced visibility of surrounding work environment.
Live video walkthrough	Camera field of view, connectivity, safety and confidentiality.
Data analysis	Dependent on data definition, completeness and integrity.
Physical product/process verification	May require on-site observation or independent measurement.

- Test technology and access before the audit.
- Agree screen-sharing, recording and confidentiality rules.
- Ask the auditee to navigate live systems rather than relying only on prepared screenshots.

- Use live video carefully for physical observation; recognise field-of-view limitations.
- Document any limitations that reduce audit confidence.
- Convert to on-site activity when evidence cannot be obtained reliably.

24. Things to Do and Things to Avoid

Do	Avoid
Be courteous, curious and impartial.	Trying to catch people out.
Record evidence identifiers as you go.	Relying on memory at the end of the day.
Follow process trails and interactions.	Reading checklist questions without observing the process.
Discuss emerging concerns factually.	Saving all surprises for the closing meeting.
Distinguish requirement from personal preference.	Writing findings because you prefer a different method.
Escalate immediate safety/conformity risks promptly.	Waiting until the report for urgent risk.
Stay within scope unless formally expanded.	Unlimited scope creep.
Recognise good controls where relevant.	Using praise to soften or obscure genuine nonconformity.

PART D – FINDINGS, REPORTING AND CLOSURE

25. Evaluating Audit Evidence

The auditor evaluates evidence against the applicable criterion. The conclusion should be proportionate to the evidence and should not assume facts that were not verified.

Outcome	Meaning
Conformity	Evidence demonstrates the sampled requirement is fulfilled.
Nonconformity	A specified requirement has not been fulfilled.
Opportunity for Improvement (OFI)	No nonconformity has been demonstrated, but an improvement opportunity or vulnerability is identified.
Positive practice / strength	A notably effective control or practice worth recognising.
Insufficient evidence	The auditor cannot responsibly conclude; further evidence may be required within scope.

26. Nonconformity versus OFI

A finding should be classified by what the evidence demonstrates, not by the discomfort that classification may cause. If a requirement is not fulfilled, it is a nonconformity. An OFI should not be used as a softer substitute for a real failure to meet a requirement.

Major and Minor Classification

There is no single universal major/minor definition that should be imposed on every internal or supplier audit. Certification schemes, customers and organisations can define classification rules differently. The audit procedure should therefore define the scheme being used before the audit.

Typical consideration	May increase significance
Systemic failure	Requirement absent or broadly ineffective across the system/process.
Product safety / airworthiness / regulatory impact	Evidence indicates significant risk to safety or regulatory compliance.
Loss of process control	Controls are ineffective such that conformity cannot be relied upon.
Repeated failure	Previous corrective action did not prevent recurrence.
Isolated lapse	Limited breakdown with the wider system otherwise effectively implemented may support a lower classification, subject to scheme rules.

CLASSIFICATION RULE: For certification audits, apply the exact definitions and rules of the applicable certification scheme (for example IAQG 9101 where applicable). For internal and supplier audits, use the organisation/customer-approved classification method and document it.

Escalation for Product Safety or Immediate Risk

Where evidence indicates an immediate risk to product safety, airworthiness, mission assurance, regulatory compliance or potentially affected delivered product, do not wait for the closing meeting. Follow the organisation's escalation arrangements and ensure appropriate containment is initiated by authorised personnel.

27. Writing Strong Nonconformities

The Three-Part Finding

Part	Content
Requirement	State or reference the exact criterion that applies.
Objective evidence	State what was observed, sampled or recorded, with identifiers.
Nonconformity statement	Clearly explain how the evidence fails to fulfil the requirement.

Example

Requirement: Procedure QP-14 requires product-acceptance gauges to be within their defined calibration interval.

Evidence: Gauge G142 was being used for final inspection of WO12345 on 20 Sep 2026. The calibration label and calibration system showed the calibration due date as 14 Aug 2026.

Nonconformity: Gauge G142 was used for product acceptance after expiry of its defined calibration interval.

Weak Findings to Avoid

Weak	Why weak
Calibration system inadequate.	No criterion, evidence or specific failure.
Operator not trained.	May be unsupported; competence requirements and evidence are missing.
Procedure should be improved.	Auditor preference is not necessarily a requirement.
Supplier has poor quality culture.	Subjective and potentially inflammatory; state the observable evidence instead.

28. Agreeing and Communicating Findings

Findings should be discussed with the auditee as they develop so factual misunderstandings can be corrected. The auditor should seek acknowledgement that the evidence and requirement are understood. The auditee does not need to personally agree with the auditor's judgement for a valid finding to exist; unresolved differences should be recorded and escalated through the defined process.

- Confirm the evidence is factually correct.
- Show the requirement/criterion.
- Explain the gap without blame.
- Allow relevant additional evidence before finalising.
- Do not negotiate away a valid nonconformity in exchange for immediate correction.
- Record unresolved disagreement objectively.

29. Closing Meeting

- Thank participants and restate objective/scope.
- Explain sampling limitations.
- Summarise overall conclusions and positive practices.
- Present each finding with criterion and evidence.
- Confirm understanding and correct factual errors.
- Identify action owner(s).
- Agree response and implementation dates appropriate to risk.
- Explain report issue date and corrective-action expectations.
- Explain closure/effectiveness-verification process.
- Record unresolved differences and escalation route.

30. Corrective Action and SMART Commitments

Audit closure should distinguish immediate correction from systemic corrective action. A rewritten procedure alone does not demonstrate effectiveness.

Element	Purpose
Correction	Fix the detected problem.
Containment	Protect potentially affected product/process while the issue is investigated.
Root cause	Determine why the problem occurred and why controls did not prevent/detect it.
Corrective action	Eliminate or control the cause to prevent recurrence.
Implementation evidence	Demonstrate the planned action was completed.
Effectiveness verification	Demonstrate the action actually prevented recurrence or achieved the intended control.

SMART Action Commitments

Actions should be Specific, Measurable, Achievable, Relevant and Time-bound. “Improve training” is weak. “Quality Manager to revise WI-14, brief all 12 final inspectors, record competence confirmation and complete by 15 Oct 2026” is much clearer.

31. Suggested Timeline

Timing	Typical activity
T-30 days	Audit request / notification
T-21	Date, scope and key logistics agreed, provide self assessment checklist(s) if applcable
T-14	Requested documentation/data received
T-7	Document review, sampling plan and self assessment checklist review if applicable
Day 0	Audit conducted and closing meeting held
Day +5	Audit report issued
Day +10	Immediate corrections/containment due where appropriate
Day +30	RCCA and corrective-action plan due (example)
Day +60/90	Implementation according to agreed risk-based dates
After implementation	Effectiveness verification and formal closure

TIMELINE CAUTION: These are suggested planning targets, not universal requirements. Product safety, regulatory, contractual, customer or high-risk issues can require immediate action and shorter timescales.

32. Audit Reporting

Minimum Report Content

- Audit identification, date and location.
- Objective, scope and criteria.
- Audit team and key auditee participants.
- Processes/areas sampled.
- Summary of audit method and limitations.
- Overall conclusion.
- Positive practices where relevant.
- Nonconformities and OFIs with evidence.
- Action owners and due dates where agreed.
- Distribution, confidentiality and approval status.
- Inclusion of completed checklist(s) may be used if applcable.

Report Formats

Format	Best use
Bottom line up front (BLUF)	Overview of audit / verification activity result before granular data where applicable.
Short-form summary	Focused verification or low-complexity audit.
Standard narrative report	QMS, supplier and process audits requiring context and conclusions.
Checklist + executive summary	Strong evidence trail where checklist captures detailed objective evidence.
NCR forms + summary report	Multiple formal findings requiring independent corrective-action workflow.
Source inspection / witness record	Focused release or test-witness activities.

REPORTING PRINCIPLE: A completed checklist can be part of the formal report if it records meaningful objective evidence. Avoid checklists that contain only ticks with no evidence trail.

33. Verification and Closure

The person closing a finding should verify both completion and, where appropriate, effectiveness. Closure evidence should be proportionate to the risk and nature of the finding.

Verification	Examples
Document review	Revised procedure, approved change, completed training records
Record sampling	Subsequent jobs demonstrate the new control is consistently used
Re-audit / follow-up visit	On-site verification for significant/systemic issues
Performance trend	Defect/escape data show sustained improvement
Product verification	Affected product re-inspected/tested and impact addressed

PART E – AUDIT EFFECTIVENESS AND PROFESSIONAL PRACTICE

34. Internal Audit Good Practice

- Build the programme around process risk and performance rather than a clause calendar alone.
- Use auditors independent of the work where practicable.
- Audit top management and process owners as part of the QMS, not only Quality.
- Include ageing internal nonconformities/QNs and cross-functional action ownership as indicators of process effectiveness.
- Check whether internal audit findings themselves are analysed for recurrence and systemic themes.
- Measure programme delivery, finding closure, repeat findings and audit effectiveness.

35. Supplier Audit Good Practice

- Start with the contractual and technical risk, not a generic 100-question checklist.
- Review supplier performance before the visit so samples target real risk.
- Include contract/PO flow-down and sub-tier control where relevant.
- Sample actual customer product where possible.
- Check that corrective actions from previous audits are sustained.
- Separate commercial negotiation from evidence-based audit conclusions.
- Agree realistic action owners and dates at the closing meeting.
- Escalate shipment/product-safety risks immediately through the defined customer-supplier route.

36. Audit Metrics and Programme Health

Metric	Use / caution
Audit programme completion	Shows delivery against plan; do not reward quantity alone.
Findings by process/theme	Identifies systemic weakness and recurring control failures.
Repeat finding rate	Strong indicator of weak corrective-action effectiveness.
Average closure time	Useful when segmented by risk/severity.
Overdue actions	Highlights governance and ownership problems.
First-pass corrective-action acceptance	Indicates RCCA quality.
Escapes after audit	Can reveal whether audit scope/sampling missed significant risk.
Positive practice adoption	Tracks useful learning transferred across the organisation.

AVOID THE WRONG INCENTIVE: Do not judge auditor performance by the number of findings raised. This encourages finding hunting rather than useful, risk-based assurance.

37. Common Audit Failure Modes

Failure mode	Why it matters	Prevention
Checklist-only auditing	Misses process interactions and emerging evidence.	Use checklist as aid; follow audit trails.
Clause-by-clause interrogation	Can become disconnected from real work.	Audit processes and map criteria to them.
No evidence identifiers	Findings become difficult to defend.	Record job, record, gauge, lot, date or system references.
OFI used instead of NC	Understates actual failure.	Classify by requirement and evidence.
Auditor consultancy	Compromises independence and ownership.	Describe requirement/gap; avoid prescribing solution unless role explicitly permits.
Surprise findings at close	Damages trust and may conceal factual errors.	Discuss evidence as it develops.
No effectiveness check	Actions may close administratively but recur.	Define verification method before closure.
Auditing only Quality	Misses process ownership across functions.	Audit accountable process owners and interfaces.
Ignoring positive evidence	Produces distorted picture.	Record meaningful strengths without diluting NCs.

38. Audit Process Maturity Model

Level	Description
1 – Reactive	Audits occur mainly after problems; inconsistent checklists and weak closure.
2 – Scheduled	Annual programme exists; standard templates and basic competence controls.
3 – Risk-based	Frequency, scope and sampling reflect process/supplier risk and performance.
4 – Integrated	Audits connect with QNs, supplier performance, PFMEA, configuration, FAI and management review.
5 – Learning system	Audit data predicts weak controls, drives prevention and shares effective practice across the organisation.

39. Document Review Verification

- Correct document identity, title, revision and approval.
- Consistency with higher-level requirements.
- Correct references to drawings, specifications and procedures.
- Roles and responsibilities are clear.
- Acceptance criteria are measurable or otherwise unambiguous.
- Records required by the process are defined.
- Changes are controlled and obsolete versions prevented from unintended use.
- Document reflects actual practice; verify on site where implementation is in scope.

40. Product Safety and Immediate Risk Escalation

Where evidence indicates an immediate risk to product safety, airworthiness, mission assurance, regulatory compliance or potentially affected delivered product, do not wait for the closing meeting. Follow the organisation's escalation arrangements and ensure appropriate containment is initiated by authorised personnel.

41. Overdue Actions and Escalation

Overdue audit actions are themselves a useful quality-culture signal. The audit programme should define escalation based on risk, age and recurrence rather than allowing findings to remain open indefinitely.

Condition	Possible management response
Low-risk short delay	Reconfirm owner and revised justified date.
Repeated missed dates	Escalate to process owner/management and review resources/root cause.
High-risk NC overdue	Increase surveillance, containment or management escalation.
Supplier systemic failure	Formal supplier recovery/SCAR escalation, approval review or additional controls.
Effectiveness failure	Reopen finding or initiate new corrective action as appropriate.

42. Auditor Competence and Development

Competence combines auditing knowledge, technical understanding, sector knowledge and personal behaviours. A lead auditor need not personally be the deepest technical expert in every process; the audit team should collectively possess the competence necessary for the scope.

Competence area	Examples
Audit methods	Planning, interviewing, sampling, evidence evaluation, findings, reporting.
QMS knowledge	ISO 9001/AS9100 and organisational QMS processes as applicable.
Technical knowledge	Manufacturing, inspection, special processes, test, configuration.
Customer/regulatory	Contractual flow-down, product safety, statutory/regulatory context.
Behaviour	Integrity, impartiality, communication, observation, professional judgement.
Digital competence	ERP/QMS records, remote auditing, data integrity and digital processes.

Suggested Auditor Development Route

- Foundation training in audit principles and the applicable QMS.
- Study organisation audit procedure, checklists and reporting method.
- Observe experienced auditors.
- Participate as an audit team member.
- Conduct sections of an audit under supervision.
- Complete a witnessed audit with feedback.
- Demonstrate competence in writing findings and reports.
- Gain technical/sector competence relevant to assigned audits.
- Maintain competence through audits, CPD, standard updates and periodic review.

43. Auditor Behaviour – What Good Looks Like

Do	Avoid
Be curious, respectful and evidence-led.	Trying to catch people out.
Explain why evidence is requested.	Using authority or intimidation.
Follow important audit trails.	Reading questions mechanically without observing work.
Challenge respectfully when evidence conflicts.	Arguing to win.
Keep facts and conclusions separate.	Speculating about motives or root cause.
Recognise good control where observed.	Turning the audit into consultancy.
Manage time and scope.	Continuing indefinitely because something is interesting.
Protect confidential information.	Recording unnecessary sensitive information.

44. Handling Difficult Audit Situations

Evidence Is Not Available

Clarify whether the record should exist, allow reasonable time to retrieve it, and test alternative evidence where legitimate. If a required record cannot be produced, document that fact accurately rather than assuming it never existed.

Auditee Disagrees with a Finding

Return to the three elements: requirement, evidence and nonconformity statement. Check for factual errors or missing evidence. If disagreement remains, record it and use the applicable escalation route; do not dilute a supported nonconformity merely to obtain agreement.

Auditor Discovers an Issue Outside Scope

Assess significance. For immediate safety or compliance risk, escalate. Otherwise record the concern and agree whether the audit scope should be amended or a separate follow-up activity raised.

Management Attempts to Direct the Conclusion

Maintain independence and fair presentation. Conclusions must follow the evidence and applicable criteria. Escalate conflicts of interest or undue pressure through the audit programme governance process.

PART F – COMPLETE WORKED EXAMPLE

45. Worked Supplier Process Audit – Example Aerospace Components Ltd

The following fictional example demonstrates the complete audit lifecycle. It is a training example and does not represent any real organisation.

Item	Example
Supplier	Example Aerospace Components Ltd
Site	Fictional UK manufacturing facility
Product	Machined and conversion-coated mounting brackets
Reason	Routine surveillance plus recent increase in supplier QNs
Scope	Contract review, purchasing flow-down, machining, outsourced conversion coating, inspection, release and nonconformance control
Criteria	Customer PO/quality clauses, supplier QMS procedures, applicable drawing/specifications, ISO 9001/AS9100 requirements as contractually applicable
Audit team	Lead Supplier Quality Auditor + Special Process SME
Duration	1 day

Pre-Audit Risk Review

Performance review identified three supplier QNs in six months: one wrong drawing revision, one missing special process certificate and one dimensional escape. One corrective action remained open beyond the original target date. These data were used to focus the audit on configuration control, special process flow-down, final release and corrective-action effectiveness.

Example Agenda

Time	Activity
09:00	Opening meeting; confirm scope, criteria and logistics
09:20	QMS/process overview and previous corrective actions
10:00	Contract review and production planning
10:45	Machining process walk and operator interviews
11:45	Product/traceability sample 1
12:15	Lunch / auditor evidence review
13:00	External special process purchasing and certification
14:00	Inspection, calibration and product sample 2
14:45	Nonconformance/CAPA and effectiveness review
15:30	Auditor consolidation
16:00	Closing meeting
16:30	Finish

Selected Checklist Questions and Evidence

No.	Question / criterion	Result	Objective evidence
1	Are customer technical and quality requirements identified during contract review and flowed into planning?	YES	PO-26114; contract review CR-26114; drawing MB-204 Rev F; route RT-204 Rev D sampled.
2	Is the current released drawing available at machining point of use?	YES	MES terminal at Machine 04 displayed MB-204 Rev F; obsolete Rev E inaccessible to operator role.
3	Are outsourced conversion-coating requirements completely flowed to the approved processor?	NO	Supplier PO SP-8841 specified process type but omitted drawing-required Class 1; processor certificate happened to state Class 1.
4	Are final inspection records traceable to product and calibrated equipment?	YES	Serial 204-0618-07 traced to IR-8804; CMM CMM-02 calibration valid to 04 Feb 2027.
5	Are previous corrective actions implemented and effective?	OFI	Drawing-revision action effective in samples; management dashboard does not flag CAPA approaching due date.

Example Audit Trail

The auditor selected finished bracket serial 204-0618-07 and traced backward: final release → inspection report → machining route → raw-material lot → external conversion-coating certificate → supplier purchase order. The certificate stated the correct coating class,

but the purchase order did not. This created a genuine requirement-flow-down weakness even though the sampled product had received the correct process.

Example Nonconformity

Requirement: Supplier procedure PUR-07 Rev C requires all applicable drawing and specification requirements for outsourced special processes to be flowed to the processor.

Evidence: Purchase order SP-8841 for conversion coating of MB-204 Rev F specified the process type but did not include the drawing-required Class 1 requirement.

Nonconformity: Applicable special process requirements were not completely flowed to the external processor on sampled purchase order SP-8841.

Example Corrective-Action Response

Stage	Example response
Containment	Review all open conversion-coating POs for MB-204 and related product families; confirm processor instructions before further processing.
Correction	Amend SP-8841 and communicate complete requirement to processor.
Cause	PO template relied on manual transcription of drawing notes; no independent check or automated characteristic flow-down existed.
Corrective action	Revise purchasing workflow to require controlled special process requirement field and independent verification before PO release.
Owner	Purchasing Quality Manager
Due	30 Oct 2026
Effectiveness	Sample next 10 special process POs across three product families after implementation; target 100% complete requirement flow-down.

Example Closure

Effectiveness review sampled ten subsequent special process purchase orders. All contained the applicable process specification, class/type and customer/source requirements. No repeat QNs associated with special process flow-down were recorded during the defined monitoring period. The finding was closed with the sample references recorded in the closure record.

PART G – PRACTICAL TEMPLATES AND CHECKLISTS

46. Audit Request / Notification Template

Field	Template entry
Audit reference	
Organisation / supplier	
Site / location	
Audit type	Internal / Supplier / Product / Process / Special Process / Other
Objective	
Scope	
Criteria	
Date / duration	
Audit team	
Requested attendees	
Documents required in advance	
Site/security/PPE arrangements	
Report/action expectations	

47. Audit Plan Template

Section	Details
Objectives	
Scope and boundaries	
Criteria and controlled references	
Key risks / focus areas	
Audit team and roles	
Processes / departments	
Samples / products to target	
Agenda	
Communication arrangements	
Confidentiality / security	
Reporting and closure arrangements	

48. Generic Audit Checklist Template

No.	Audit question	Requirement / criteria	YES / NO / N/A	Objective evidence / notes	Finding ref.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

49. Nonconformity Record Template

Field	Entry
Finding reference	
Requirement / criterion	
Objective evidence	
Nonconformity statement	
Classification	
Immediate containment / correction	
Responsible owner	
Response due date	
Cause analysis	
Corrective action	
Implementation evidence	
Effectiveness evidence	
Closure decision / date	

50. Closing Meeting Action Log

Ref.	Finding / action	Owner	Due date	Status
1				
2				
3				
4				

51. Audit Report Summary Template

Field	Entry
Audit reference	
Organisation/site	
Date	
Audit type	
Objective	
Scope	
Criteria	
Audit team	
Participants	
Summary conclusion	
Positive practices	
No. major NC	
No. minor NC	
No. OFI	
Report issue date	
Action response due	

52. Audit Effectiveness / Closure Record

Field	Entry
Finding reference	
Corrective action implemented	
Implementation evidence	
Effectiveness method	
Samples reviewed	
Results / trend	
Recurrence identified?	
Closure decision	
Closed by / date	

53. Quick Reference – The Auditor's Ten Rules

- Know the scope and criteria before you start.
- Audit the process, not just the paperwork.
- Follow evidence rather than blindly following the checklist.
- Ask open questions and use 'show me'.
- Record enough objective evidence to support your conclusion.
- Sample intelligently and understand the limitation of the sample.
- If there is evidence of non-fulfilment, document the nonconformity clearly.
- Do not prescribe solutions or guess root causes.
- Agree owners and time-bound actions before leaving where practicable.
- Do not close a corrective action until effectiveness is demonstrated.

54. Final Perspective

A high-quality audit is not a search for faults and it is not a paperwork exercise. It is a disciplined examination of whether requirements are understood, controls are implemented, evidence is credible and processes achieve their intended results. The strongest auditors combine technical curiosity with impartiality, professional behaviour and a willingness to follow evidence wherever it leads. Used well, auditing provides assurance, exposes risk early and creates a structured route from evidence to corrective action and improvement.

55. Special Processes Institute

The Special Processes Institute (SPI) provides free practical resources and web applications covering quality, special processes, productivity, control and knowledge. This guide is intended to complement, rather than replace, controlled standards, customer requirements and competent professional judgement.

56. Document Revision Control

Rev	Date	Change	Author
1	20 Sep 2026	Established the Quality Auditing & Verification Guidebook	Konrad Burgoyne

SPECIAL PROCESSES INSTITUTE

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