



WORK INSTRUCTION

**Lethabo
Power Station**

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Project Quality**

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1. INTRODUCTION

This document is aimed at enhancing the effective relationship between the client and the contractors. To ensure that quality expectations are communicated at the beginning of the contract engagement. It further seeks to meet the requirements of ISO9001:2015 clause 8.4 in terms of how Lethabo Power Station controls externally provided processes, products and services.

2. SUPPORTING CLAUSES

2.1 SCOPE

2.1.1 Purpose

The purpose of this Work Instruction is to ensure that quality of projects, contracts and contract work is managed effectively to ensure client/customer satisfaction, with minimum loss to both the client and the contractor. Further aim is to effectively facilitate Quality requirements throughout the project.

2.1.2 Applicability

This Work Instruction is applicable to all externally provided processes, products and services at Lethabo Power Station, especially those undertaken as projects.

2.2 NORMATIVE/INFORMATIVE REFERENCES

2.2.1 Normative

- SANS 9001: Quality Management Systems – Requirements
- SANS 10005: Quality Management System – Guidelines for Quality plans
- SANS 10007: Quality Management System – Guidelines for Configuration Management
- SANS 274: Quality Management Systems — Guidelines for Quality Management in Projects
- QM 58: Supplier Contract Quality Requirements Specification
- LBQ10000: Quality Management Manual
- 240-6628253: Standard for Welding Requirements

2.2.2 Informative

- SANS 9000: Quality Management Systems – Fundamentals and Vocabulary
- SANS 9004: Managing for the Sustained success of an organization – A Quality Management approach
- ISO14001: Environmental management systems — Requirements with guidance for use

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- OHSAS18001: Occupational health and safety management systems – Requirements
- ISO31000: Risk management — Principles and guidelines

2.3 DEFINITIONS

2.3.1 Classification

- a) Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

| Definition | Explanation |
|-----------------------------------|---|
| Application For Defect Acceptance | shall mean the same as a 'concession', which may be granted by the client to use product 'as is', if there is a deviation from the works information. |
| Contract Quality Plan | A document specifying which procedures and associated resources shall be applied by whom and when to a specific project, product or process or contract |
| Corrective Action | Action to eliminate the cause of a detected nonconformity or other undesirable situation |
| Corrective Action Request | shall be request to correct any deficiencies or deviations that are found in or from the documented Quality Management System procedures or work instructions. |
| Data Book | shall represent a collection of all contract quality related records accumulated by the contractor during the contract or project and is handed over to the client on completion of the contract. |
| A Defect | A non-fulfilment of a requirement related to an intended or specified use. |
| Defect Notification | shall be an official notification of any defect (non-conformance) in workmanship, product or service, which needs to be rectified (repaired) or accepted by the client by means of an application for defect acceptance. |
| Hold Point | shall be an activity on the quality control plan beyond which no further activities shall be undertaken unless there is a signed acceptance by the project manager, supervisor, inspection agency, or inspection authority. |
| Inspection Agency | shall be an organisation or person appointed by the client, or contractor with the client's approval, for the purpose of performing: Quality control monitoring Quality assurance monitoring Inspection and testing services |
| Inspection Authority | shall be an organisation or person appointed by the client or contractor (with client approval) and approved Chief Inspector |

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| Definition | Explanation |
|----------------------|--|
| | of the Department of Labour in terms of the OHS Act. |
| Non-Conformance | Non-fulfilment of a requirement |
| Preventive Action | Action to eliminate the cause of a potential nonconformity or other undesirable potential situation |
| Product | Result of a process |
| Quality Control Plan | A documented quality management plan focused on fulfilling quality requirements |
| Regulatory Body | shall mean a person or persons representing a statutory body, as required by law |
| Repair | shall mean the process of correcting a defect. |
| Stop Work Order | shall mean an official notification that all further work on the contract is stopped until such time that all defects are corrected to the client's satisfaction. Work may only re-commence with the client's written authorisation. |
| Witness Point | shall be an activity on the quality control plan requiring the presence of the client representative during the inspection or test and which has been accepted as satisfactory, by signature, before work is allowed to continue. |
| Works Information | shall mean the same as the 'scope of work' or 'product brief' as specified in the tender enquiry and describes what needs to be achieved by the contract. |
| Punch/Snag List | In most countries a punch list is part of the construction contract or otherwise used as a way to meet the quality terms stated. |

2.4 ABBREVIATIONS

| Abbreviation | Description |
|--------------|--|
| CAR | Corrective Action Request |
| PQP | Project Quality Plan |
| CV | Curriculum Vitae |
| AQMR | Area Quality Management Representative |
| ISO | International Organisation for Standards |
| NCR | Non-conformance Report (Defect Notification) |
| NEC | New Engineering Contract |
| OHS | Occupational Health & Safety |
| QCP | Quality Control Plan |
| QMS | Quality Management System |
| SABS | South African Bureau of Standards |
| LFM | Lethabo Form |

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2.5 ROLES AND RESPONSIBILITIES

- 2.5.1 Purchasing/Procurement shall be responsible for ensuring that this document is given to potential contractors with the tender enquiry or at the relevant site meeting.
- 2.5.2 The project/contract manager shall be responsible for ensuring that this procedure is adhered to by all parties involved.
- 2.5.3 The Quality section shall monitor and ensure that, this Work Instruction is followed and adhered to. To ensure that all documentation comply with quality standards and that quality requirements are followed in all other processes.

2.6 PROCESS FOR MONITORING

Adherence to this procedure will be monitored by auditing, gap analysis or inspections.

2.7 RELATED/SUPPORTING DOCUMENTS

- LFM563 - Non Conformance Reporting (NCR)
- LFM1007 - Quality Control Plan for Contractors
- LFM1010 - Notification of Inspection
- LFM1012 - Application for Defects acceptance (Concession)
- LFM1013 - Release note
- LFM035 - (Quality Assurance) Stop Work Order
- All specified and required NEC documents

2.8 IT SYSTEMS

- SAP_PM
- SAP_QIM
- Primavera

3. DOCUMENT CONTENT

3.1 TENDER ENQUIRY

- 3.1.1 The project manager/System Engineer shall produce a concise and accurate description of the work (scope of works or product brief) to be included in the tender enquiry.
- 3.1.2 Purchasing/Procurement processes shall be followed to complete the tender process.

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3.4 THE QUALITY REQUIREMENTS

- 3.4.2 The main contractor shall be responsible and accountable for the quality of product delivered or service provided by sub-contractors.
- 3.4.3 The main contractor shall verify that the sub-contractor has an ISO 9001 compliant QMS in place.
- 3.4.4 In the event that the sub-contractor does not have his/her own QMS they shall work within the main contractor's QMS.
- 3.4.5 It shall be the main contractor's responsibility to assure that the sub-contractors are capable of compliance to all conditions of the contract and where applicable submit the same documentation to the contractor as the contractor submits to the client.
- 3.4.6 The contractor shall submit the CV for the Quality representative and where necessary the Quality Team during the tender stage.
- 3.6.7 The client will conduct inspections on the work that is and has been executed within the project on a random basis and shall be recorded in the template below (Appendix C)

3.5 THE CONTRACT/PROJECT QUALITY PLAN (Refer Appendix A)

- 3.5.1 The contract/project quality plan (PQP) shall be submitted to the client within the contractually specified period. The PQP to be aligned to ISO 10005: QMS – Guidelines for Quality plans.
- 3.5.2 The PQP shall be verified and approved by the client quality representative before the contractor commences with any work.
- 3.5.3 The PQP is a living document and shall therefore be reviewed and revised to keep track of any changes that may occur during the execution of the contract/project.
- 3.5.4 Any revisions to the PQP shall be submitted to the contract/project manager or client quality representative for approval before such revisions are implemented and if necessary before any further work is undertaken.
- 3.5.5 The original PQP shall be retained as a baseline for comparison at the completion of the project. The PQP shall form part of the data book.

3.6 INSPECTION AND TEST PLAN (ITP)

- 3.6.1 And ITP shall be according to the client's template and shall be filled in full to track all the documentation required.
- 3.6.2 The ITP shall follow the framework provided in Appendix C of this document

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3.6.3 The test report shall be compiled to record the Inspection and Testing taking place during the project and shall be according to the template indicated in the appendix B of this document.

3.6.4 The test report numbers shall be allocated by Quality Assurance and recorded in the ITP spread sheet. The test report (record) numbers shall be provided for each and every test report compiled.

3.6 QUALITY CONTROL PLANS

3.7.1 The contractor shall provide QCPs for all the processes to be undertaken within the project; for example:

- Design (if applicable)
- Items to be manufactured
- Installation and erection
- Commissioning

Note: The client may require or request the contractor to use the client standard form for the QCP instead of their own.

3.7.2 The QCP shall be verified and approved by the client representative before the contractor commences with the work.

3.7.3 The client's contract/project manager and/or quality representative shall where necessary consult with the appropriate representative of the functions/system involved and/or the inspection authority and/or agency in respect of the completeness of the QCP.

3.7.4 If additional activities, inspection, witness and hold points are required, they shall be added to the QCP and approved accordingly.

3.7.5 QCPs shall be reviewed and revised in respect of changes to the scope of work and be approved by the client representative before any new work is undertaken or work progresses.

3.8 THE RISK MANAGEMENT PLAN

3.8.1 The contractor shall identify all real and potential risks associated with the contract/project,

3.8.2 Identified risks shall be quantified in terms of the probability of occurrence and the financial loss that may be incurred if the risk materialises.

3.8.3 The quantified risks shall be ranked based on the expected monetary value, for example; low, medium and high risk categories.

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3.8.4 A risk response shall be developed for all medium and high risks.

3.8.5 The risk management plan shall satisfy the framework provided in appendix D (*The Risk Management Process Flow*) of this document.

3.9 THE INSPECTION AUTHORITY

3.9.1 An inspection authority, approved by the Department of Labour, shall be appointed in terms of the OHS Act where this is required.

3.9.2 The inspection authority shall where applicable approve the design, manufacture, construction, erection, commissioning, maintenance or repair and testing of plant, equipment and machinery, with specific reference to:

- Pressure system of boilers
- High pressure and/or temperature pipe work
- Associated material of high pressure/temperature systems.

3.9.3 The inspection activities are carried out in terms of the RBI management System and/or OHS Act, and/or the scope of work and the final inspection certificate is issued by the inspection authority.

3.9.4 The contractor shall submit all information and documentation as per the scope of work to the inspection authority, on request by the contract/project manager.

3.9.5 The inspection authority shall ensure that the work performed by the contractor conforms to the specified scope of work and meets any and all applicable legislative requirements.

3.9.6 The activities of the inspection authority shall include, but not be limited to:

- Witness of inspections and tests
- Monitoring the contractor's quality function
- Sampling checks against the contractor's records
- Record verification
- Performing or witnessing independent inspection and tests

3.9.7 No plant, equipment or machinery shall be put into service (operation) until such time that a certificate has been issued by the inspection authority stating that such plant, equipment or machinery is safe to use.

3.10 INSPECTION AND TESTING

3.10.1 The contractor shall ensure that all work has been fully inspected, accepted and documented prior to requesting any inspection and testing by the client's quality representative or the inspection authority/agency.

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- 3.10.2 The contractor's quality representative shall ensure that all inspections and testing is performed according to applicable QCP.
- 3.10.3 The appropriate activity/operation shall be signed and dated by all persons as indicated on the QCP.
- 3.10.4 Where contractually required an acceptance or quality assurance certificate shall be made out and signed by the issuing party.
- 3.10.5 The contractor shall give the client's quality representative, and/or contract/project manager and/or inspection authority at least 72 hours' notice to witness and/or hold points on the QCP.
- 3.10.6 The notification shall be in writing by using the LFM1010 form.
- 3.10.7 A punch list or Snag list will be developed to highlight the issues that still need to be addressed before the handover or payment is initiated. Appendix M & N shall be used to manage punch\snag list.

3.11 CONTROL OF DEFECTS / NON CONFORMANCES

- 3.11.1 Defect notification shall be raised by the contractor's and client's personnel whenever any non-conformances are detected in process, product, material, items, parts, plants or workmanship in general. The defects raised shall be listed as a snag list for items that are identified from the inspections, and are seen as early warning.
- 3.11.2 The defect notification raised by the contractor shall be submitted to the contract/project manager or client's quality representative for review.
- 3.11.3 All client defect notification shall be submitted to the client's quality representative for registration, review and submission to the contractor's quality representative for action.
- 3.11.4 All defect notifications are permanent quality records and shall be controlled in accordance with the contractor's procedure for control of records.
- 3.11.5 The contractor's quality representative shall register all defect notifications, irrespective of whether the client or the contractor's own staff has raised the notification, in the appropriate register/system and process the document as per the relevant procedure laid down in QMS.
- 3.11.6 As a minimum the processing of the defect notification shall include:
- Information of the recipient of the NCR
 - Information about the initiator or issuer
 - Correction taken to rectify the issue

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- Corrective action (Action to ensure that the issue does not recur by using Root Cause Analysis methodologies)
- Proposed preventive action (Action taken to stop the potential Non-conformance from taking place)
- Follow-up to establish success or failure of implemented actions
- Formal closure

3.11.7 All defects or potential defects shall be investigated to determine the cause of the defect.

3.11.8 Corrective and/or preventive action shall be formulated, agreed and implemented.

3.11.9 All corrective and preventive actions shall be followed up, evaluated and closed out.

3.11.10 In the event where a defect or variation from specification cannot be corrected the contractor shall submit an application for acceptance of defect or concession (LFM1012). This situation normally arises where:

- There is a defect, but the performance of the product, equipment or plant is not affected
- The cost of correcting the defect is very high and there is only a minor impact on the performance of the product, equipment or plant is not affected
- The defect cannot be corrected
- Original replacement parts are no longer available due to the age of the plant or equipment or the original manufacture parts are not currently available and substitute or generic parts must be used

3.11.11 An application for defect acceptance or concession means to 'use as is' or 'in place of' and shall be made in writing.

3.11.12 The client shall give written approval before the concession can be implemented otherwise the responsibility for any damages or losses incurred as well as the impact of related latent defects will lie with the contractor.

3.11.13 Any non-compliance with a defect notification, or corrective action request, continued poor workmanship resulting in recurring non-conformance to contractual requirements, including those that are not of a quality nature shall, as a last resort, result in the issuing of a 'stop work order' (LFM235).

3.11.14 The stop work order shall imply that all work on the contract shall be stopped until such times that the problem issues have been resolved to the satisfaction of the client, or the inspection authority and/or the inspector from the Department of Labour.

3.11.15 Work shall only recommence when the contract/project manager has given written authorisation to do so.

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3.11.16 The station has a documented procedure (LBQ25003) to be followed when managing Non-Conformances. Contractors are expected to have an approved procedure that deals with the management of Non-Conformances.

3.12 HANDLING OF PRODUCTS

3.12.1 Release of plant and material (product) shall fall into two categories:

- Release for shipment/transport (delivery to client or site)
- Release of site work (work performed on site)

3.12.2 No plant or material to be inspected in accordance with a QCP shall be released for shipment or transport unless it has been inspected and released as conforming to requirements by the contractors quality staff and/or the contract/project manager, client quality representative or inspection authority/agency.

3.12.3 Any release of plant or material shall be done in writing, using the specified documentation (LFM1013).

3.12.4 A copy of the release certificate (or relevant documentation) shall accompany the item from its origin to its destination and shall be produced when delivered.

3.12.5 No plant or material produced or manufactured on site requiring inspection in accordance with the specific QCP shall be released for further use or put into service unless it has been released by the responsible person.

3.12.6 If the plant or material conforms to requirements the responsible person shall issue a release certificate (LFM1013).

3.12.7 To ensure that the equipment or plant operated safely and effectively the contractor shall provide any or all special instruction, at the time of delivery or handover.

3.12.8 Such instructions shall include special requirements for:

- Safe handling
- Storage
- Protection from environmental degradation
- Shelf life
- Use (operating instructions)
- Special safety precautions during operation

3.12.9 Where contractually agreed certain items, such as batteries, shall not be installed or placed into service, except for testing purposes, until such time that the equipment or plant is put into operation.

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3.12.10 The contractor shall ensure that product, plant, equipment or machinery is delivered in a condition that meets the client's (contractual) requirements.

3.12.11 The contract/project manager and/or client's quality representative and/or inspection authority/agency shall accept product, plant or material only after inspection and testing as stipulated in a QCP or as otherwise agreed to ensure that all requirements are met.

3.12.12 Items that do not conform shall be rejected and suitably identified as non-conforming or as a defect and handled as such.

3.13 CONTROL OF RECORDS

3.13.1 All quality records shall be controlled in accordance with the requirements of ISO 9001 and LBQ21002, covering the following:

- Identification
- Legibility
- Storage
- Access (Security)
- Retrieveability
- Disposal

3.13.2 Some of the records shall not form part of the data book, but the contractor/sub-contractor shall:

- Control these records in the same manner as he/she would control all other records
- Retain the records for a time period agreed with the contract/project manager or client's quality representative
- On request make such records available to the client's designated representatives who require access in order to perform their functions

The contractor shall scan and submit a soft copy of the projects records to the client.

Appendix G – (Control of Records Process Flow chart) provides a picture of how the records should be managed.

3.14 THE DATA BOOK/QUALITY DOSSIER

3.14.1 The contractor shall assemble all quality records, as specified in the index submitted in the PQP or ITP.

3.14.2 The data book shall be handed to the client on closure of the contract/project.

3.14.3 The client's quality representative shall verify the contents of the data book against the index submitted in the PQP.

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3.14.4 The client's quality representative shall notify the contractor, by means of a defect notification, of any discrepancy or non-compliance of the data book.

3.14.5 The contractor shall initiate the appropriate corrective action to comply with requirements.

3.14.6 The data book shall contain, but not necessarily be limited to the following:

- A cover page containing:
 - Contract/project name
 - A summary of the scope of work
 - Client's contract number
 - Contractor's order number
 - Sub-contractor's order number(s) (if any)
 - Contractor's review
 - Contractor's approval signatures
 - Data of compilation
 - Project records
 - Date handed to client
- A table of contents. As the data book may cover a number of file and be partially or fully in electronic format, the table of contents must mention the file number or folder names in which various documents are stored. Each file or folder must have its own table of contents to indicate what record types are stored therein.
- A table of specific product, equipment, plant and material to which data book or sub-data books apply, with unique identification numbers and in which files and/or electronic folders the relevant records can be found
- A summary of design calculations if the contract/project involved design
- A checklist verifying that technical and quality assurance requirements have been met and that the data book meets contractual requirements
- All completed original inspection and test plans
- All inspection and test records
- All certificates of conformance for product and material purchased
- The defect notification register and all original defect notifications
- All release forms
- A list of order numbers and a description of product, plant or material purchased
- If contractually required copies of all un-priced purchase orders
- All other quality records relevant to the contract/project not listed above (except contractor proprietary records)
- A copy of the latest revision of the approved contract quality plan
- A copy of the contract/project post-mortem report
- A list of NCR's registered during the contract period, indicating the status thereof
- A punch/snag list registered during the project and indicating the status thereof

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4. AUTHORISATION

This document has been seen and accepted by:

| Name | Designation |
|---------------|--|
| T Conradie | Power Station Manager |
| R Heymans | Risk & Assurance |
| B Phahle | Risk & Assurance Manager |
| H Sewsunker | Engineering Manager |
| M Tsoali | Finance Manager |
| L Monnakgotla | Maintenance Manager |
| R Hartman | Production Manger – Primary Energy |
| T Ramulumisi | Acting Production Manger – Outside Plant |
| D Mokete | Acting Outage Manager |
| C Peres | Project Manager |
| V Mokoena | Acting Operation Manager |
| Sanah Ntjio | Production Manger – Units1 - 3 |
| Palo Motaung | Production Manger – Units 4 - 6 |

5. REVISIONS

| Date | Rev. | Compiler | Remarks |
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| March 2008 | 00 | M Rossouw. | First Issue |
| August 2010 | 01 | M Rossouw. | Change the number from LBQ02050006 to LBQ25006PC, Changed forms from DCCQ to LFM |
| Jan 2015 | 02 | M Maseola | Updated into a new template, Reviewed section 3.5 contents of the procedure and aligned them to ISO 1005. Removed Appendix A - Summary of ISO 9001 Requirements (Note: The reference numbers refer to ISO 9001) |
| 2017-09-27 | 03 | M Maseola | Review Period |

6. DEVELOPMENT TEAM

- M Maseola

7. ACKNOWLEDGEMENTS

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- 8.17 Appendix V – Non-Conformance Process Flow Chart

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8.1 Appendix A - Format and Layout of Contract Quality Plan

| | | | |
|---------------------|----------------------|---------------------------|--------------------------|
| Company Name | | Project Manager: | |
| PQP No: | Project Name: | Contract\Order No. | PQP Rev: Date: |
| | | | |

| Activity | Detailed Description | Document/ Procedure/Work Instruction | Responsible Area (Dept. Sect) |
|---|-----------------------------|---|--|
| Scope | | | |
| Quality Objectives | | | |
| Management Responsibility | | | |
| Documentation | | | |
| Records | | | |
| Resources | | | |
| Requirements Review/ Customer Specifications | | | |
| Customer Communication | | | |
| Design And Development | | | |
| Purchasing | | | |
| Production | | | |
| Identification And Traceability | | | |
| Customer Property | | | |
| Storage and Handling | | | |
| Non-Conforming Products | | | |
| Monitoring & Measurement | | | |
| Inspection and Test Equipment | | | |
| Audit | | | |
| | Name & Surname | Signature | Date |
| Compiled by: | | | |
| Approved by: | | | |
| Quality Review: | | | |
| Approved by (Client QA) | | | |

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8.2 Appendix B: Technical Report Template

| | | |
|---|-------------------------|----------------------------------|
|  | Technical Report | Lethabo Power Station |
|---|-------------------------|----------------------------------|

Title: **TITLE OF REPORT**

Unique Identifier

Report Number:

XXXXXXXXXXXX

Document Type:

RP

Area of Applicability

.....

Date Compiled:

Day/Month/Year

Classification:

Controlled Disclosure

Signatures:

Compiled by:

Review by:

Approved by:

Quality Review:

.....
C xxxxxxx

Project Leader

Date:

.....
W xxxxxxxxx

System Engineer

Date:

.....
C xxxxxxxxxxx

AIA\Manager

Date:

.....
D xxxxxxxxxxxxxxxxx

Quality Assurance

Date:

.....
(Change names and titles as required)

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NOTE:

- **Change all red type to black before saving the document and delete this note**
- Font - Arial 11pt (unless a different font size is already used in the template)
- Line spacing - 1
- 2 Lines space before a level 1 heading
- Use 2 spaces between words when typing in capital letters
- In the case of abbreviations, do not use spaces between letter or symbols
- Between main headings (level 1 heading) use 2 blank lines
- Set TAB to 1,25 cm in all cases
- Indentation as indicated in the template and this work instruction
- Level 1 headings - **12pt, CAPITAL LETTERS AND BOLD**
- Level 2 headings - **Bold**
- Heading numbers - **Bold**
- All text with full justification
- PURPOSE starts on a new page

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1. Introduction

2. Resources

- 2.1 Project Team
- 2.2 Skills/Knowledge Required
- 2.3 Tools, Equipments, Measuring & Monitoring Devices

3. Background Information

- 3.1 Scope of Testing
- 3.2 Test Requirements
- 3.3 Test Environment (Conditions Under which Test was performed)

4. Test Outcome/Results of the Tests

(The test to indicate the Pass/Fail criteria)

5. Conclusions

6. Appendices

- 6.1 Results/Inspection sheets
- 6.2 Equipment calibration data

#

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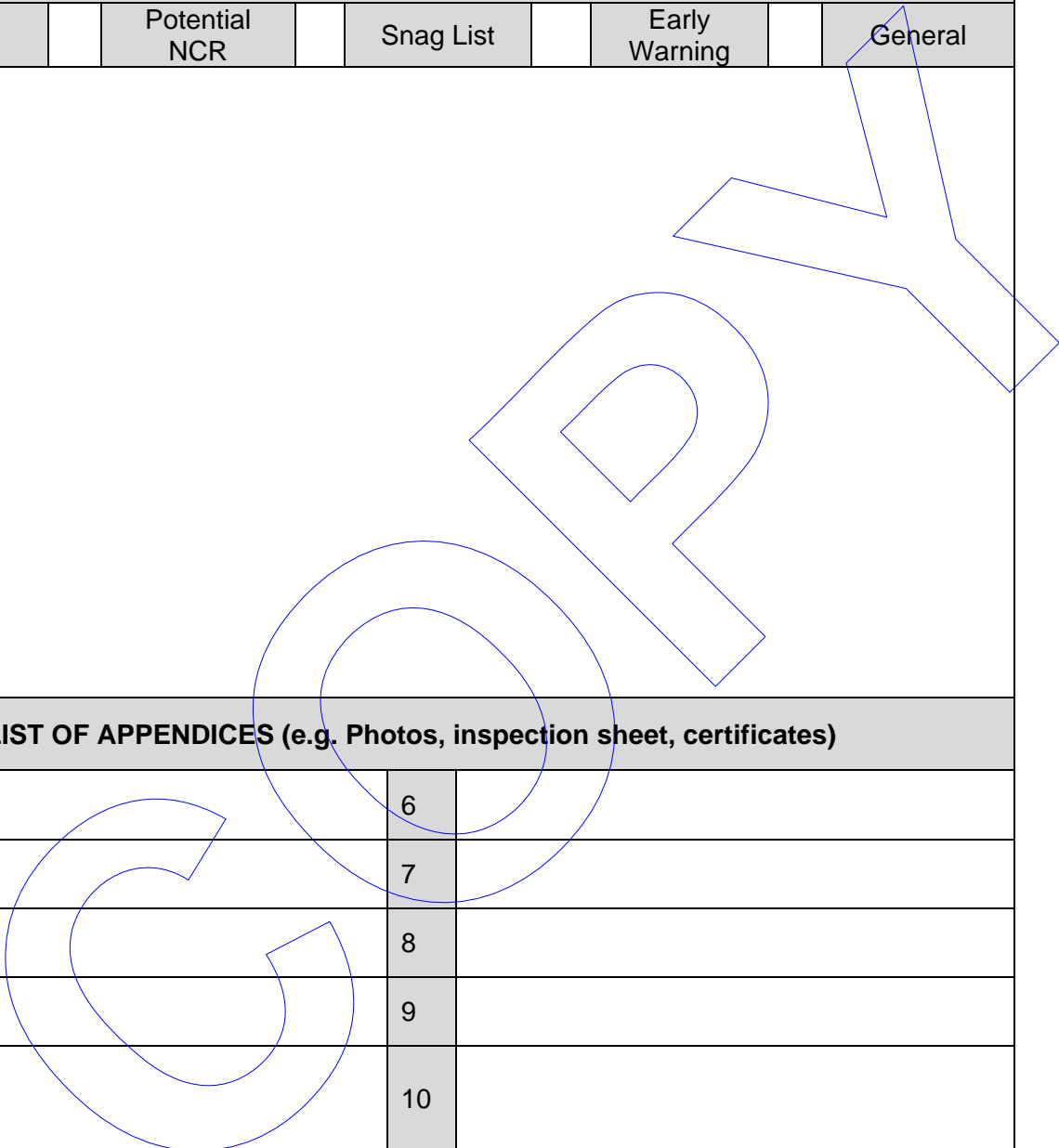
#

8.3 Appendix C: Quality Control Inspection Report Template

| | | | | | |
|-------------------------------------|--|---------------|-------------------|------------------------|----------------|
| ESKOM | LETHABO POWER STATION | | Doc. No. | LFMXXXX | |
| | | | Ref. | LBQ25006 | |
| | QUALITY CONTROL INSPECTION REPORT | | Date | 2017/01/25 | |
| | | | Page | 1 of 1 | |
| Inspection Report No. | | | Version | | |
| Site Name | LETHABO POWER STATION | | Unit No. | | |
| Equipment Name | | | | | |
| Equipment No. | | | System | | |
| Plant Area | | | DOI | | |
| Responsible Person | | | | | |
| Responsible Section/Contractor | | | Report Risk Level | | |
| Contact Number (RP) | | | | | |
| Inspection Summary (Tick) | Passed | Failed | Pending | N/A | Remarks |
| Part A: Quantity | | | | | Remark A |
| Part B: Specification | | | | | Remark B |
| Part C: Visual Quality Check | | | | | Remark C |
| Part D: On-Site Tests | | | | | Remark D |
| Part E: Deliveries | | | | | Remark E |
| Part F: Photo Information | | | | List on the Appendices | |
| Remark A | | | | | |
| Remark B | | | | | |
| Remark C | | | | | |
| Remark D | | | | | |
| Remark E | | | | | |
| Remark F | | | | | |

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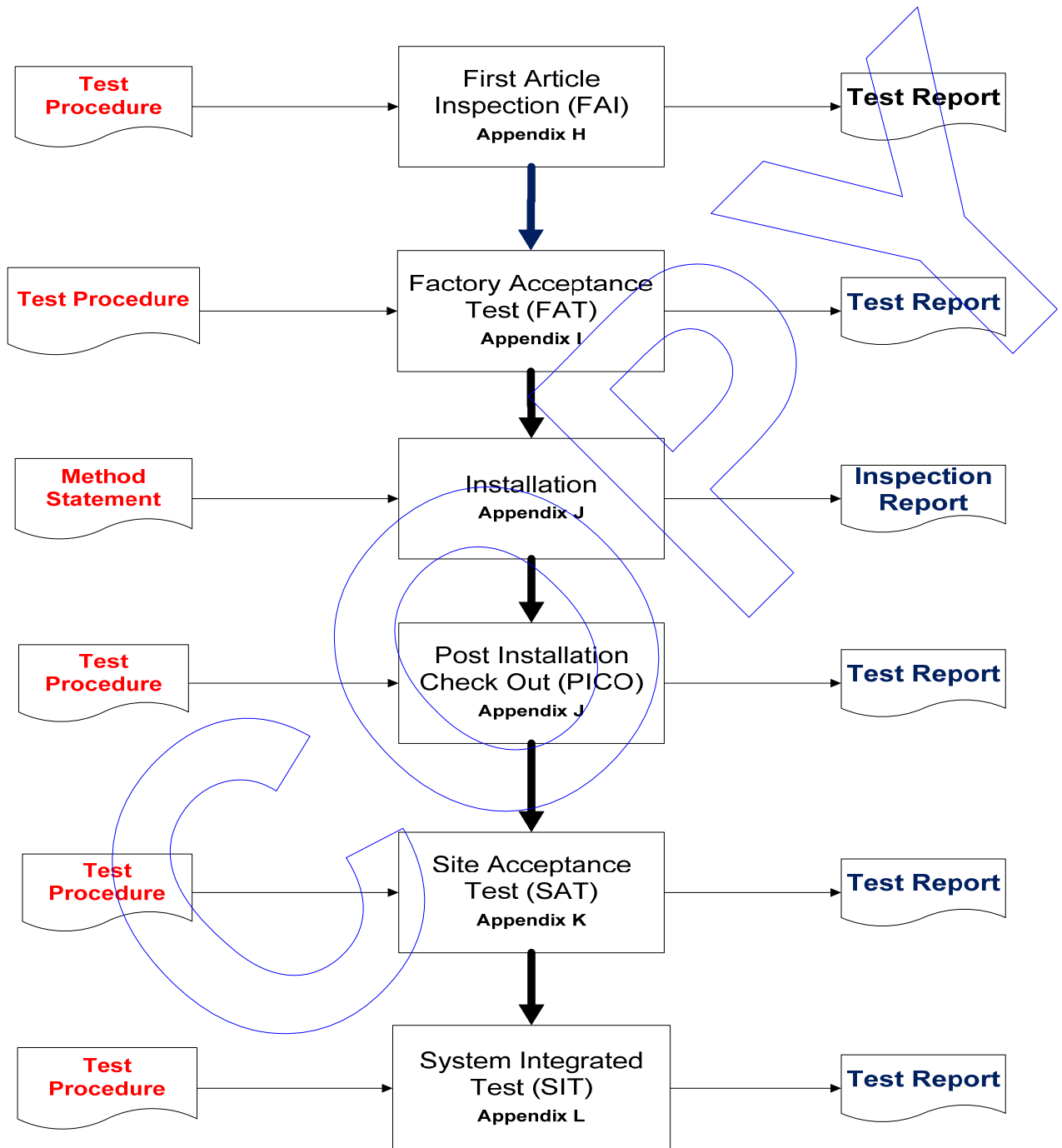
| | | | | | | | | | |
|---|-----|--|---------------|--|-----------|--|---------------|--|---------|
| Overall Remarks | | | | | | | | | |
| DESCRIPTION OF ISSUE/S (Tick the appropriate box) | | | | | | | | | |
| | NCR | | Potential NCR | | Snag List | | Early Warning | | General |
|  | | | | | | | | | |
| LIST OF APPENDICES (e.g. Photos, inspection sheet, certificates) | | | | | | | | | |
| 1 | | | | | 6 | | | | |
| 2 | | | | | 7 | | | | |
| 3 | | | | | 8 | | | | |
| 4 | | | | | 9 | | | | |
| 5 | | | | | 10 | | | | |
| Inspector's Name | | | | | | | Report Date | | |
| Inspector's Signature | | | | | | | | | |

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8.4 Appendix D: ITP process flow

INSPECTION & TEST PLAN HIGH LEVEL PROCESS CHART

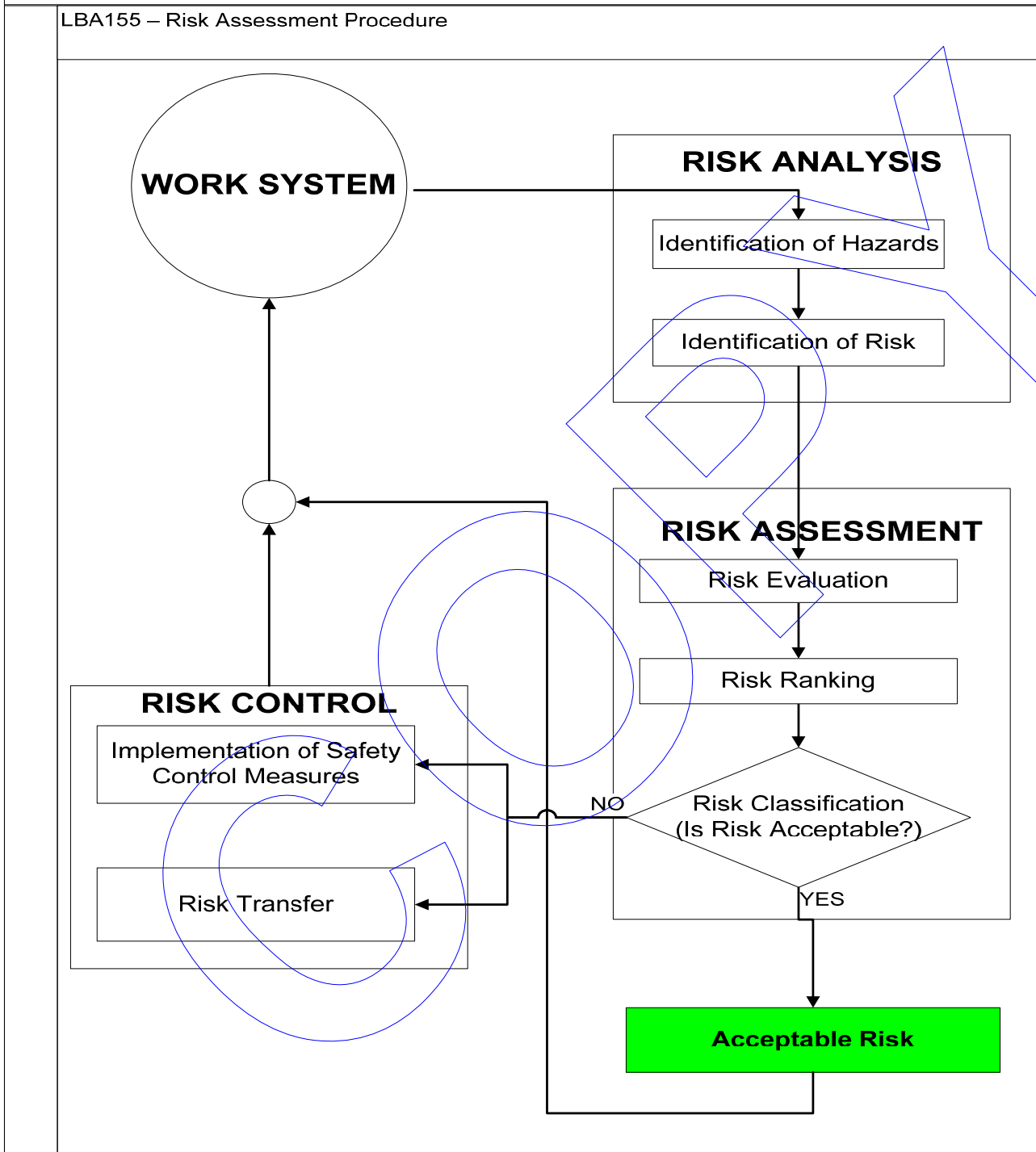


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8.5 Appendix E: Risk management process flow

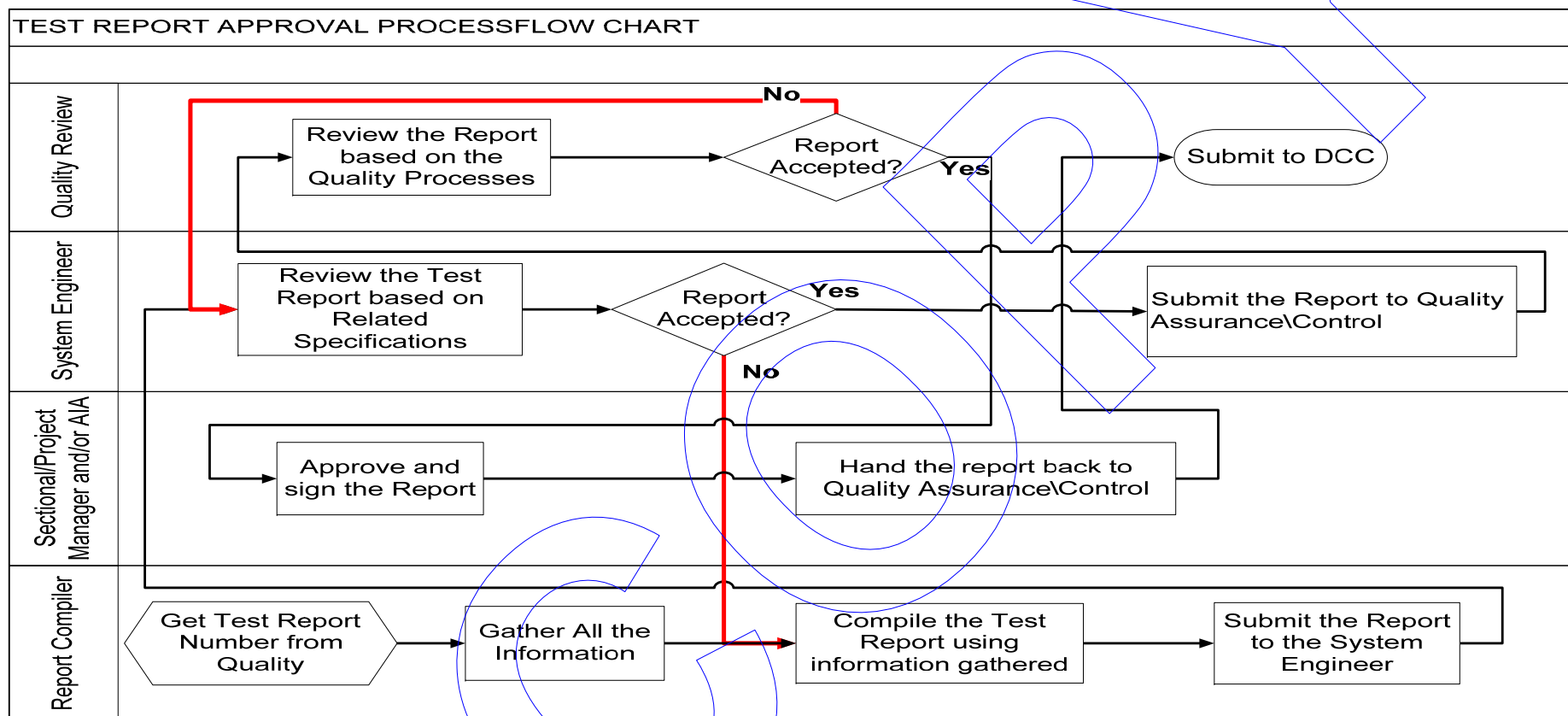
RISK MANAGEMENT PROCESS FLOW CHART



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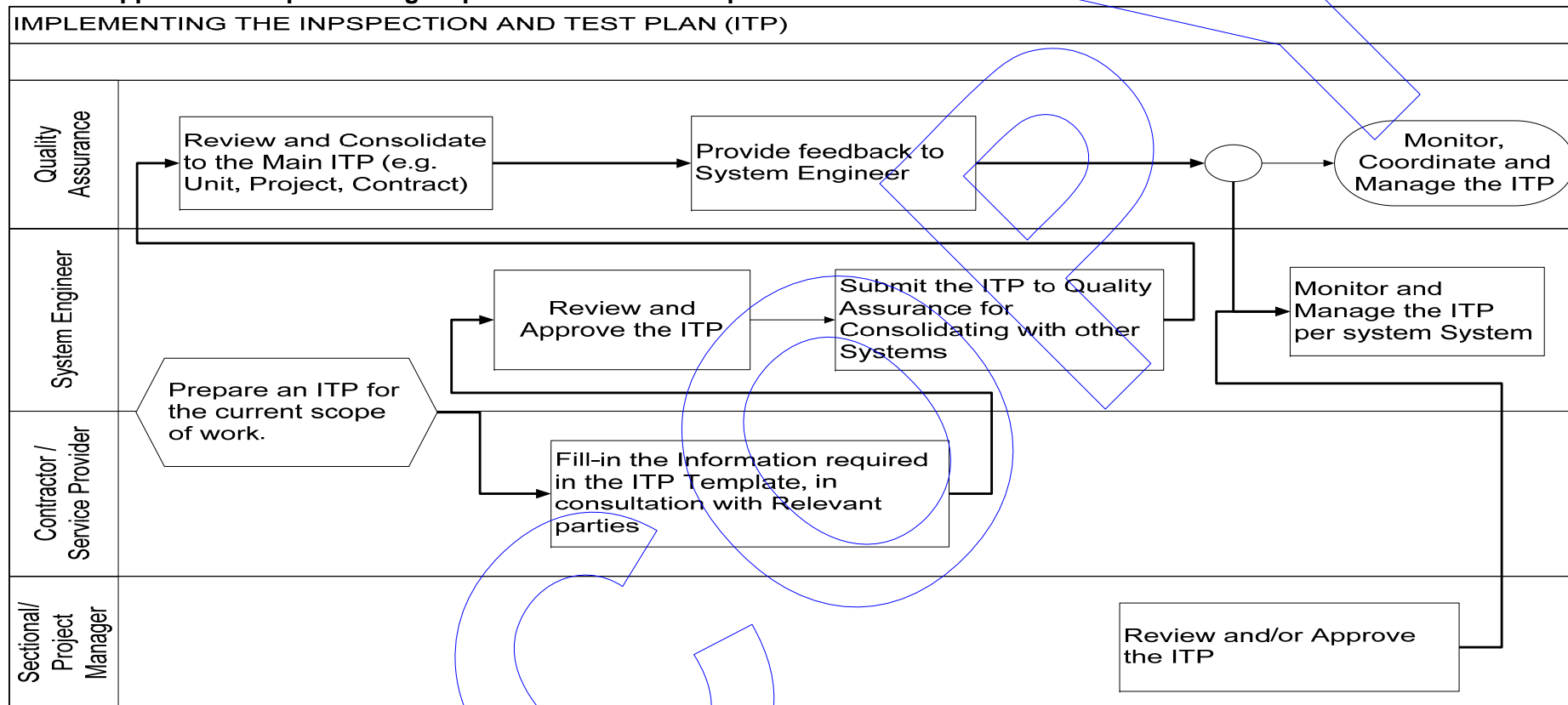
8.6 Appendix F: Test Approval Process Flow chart



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8.7 Appendix G: Implementing Inspection and Test Plan process flow



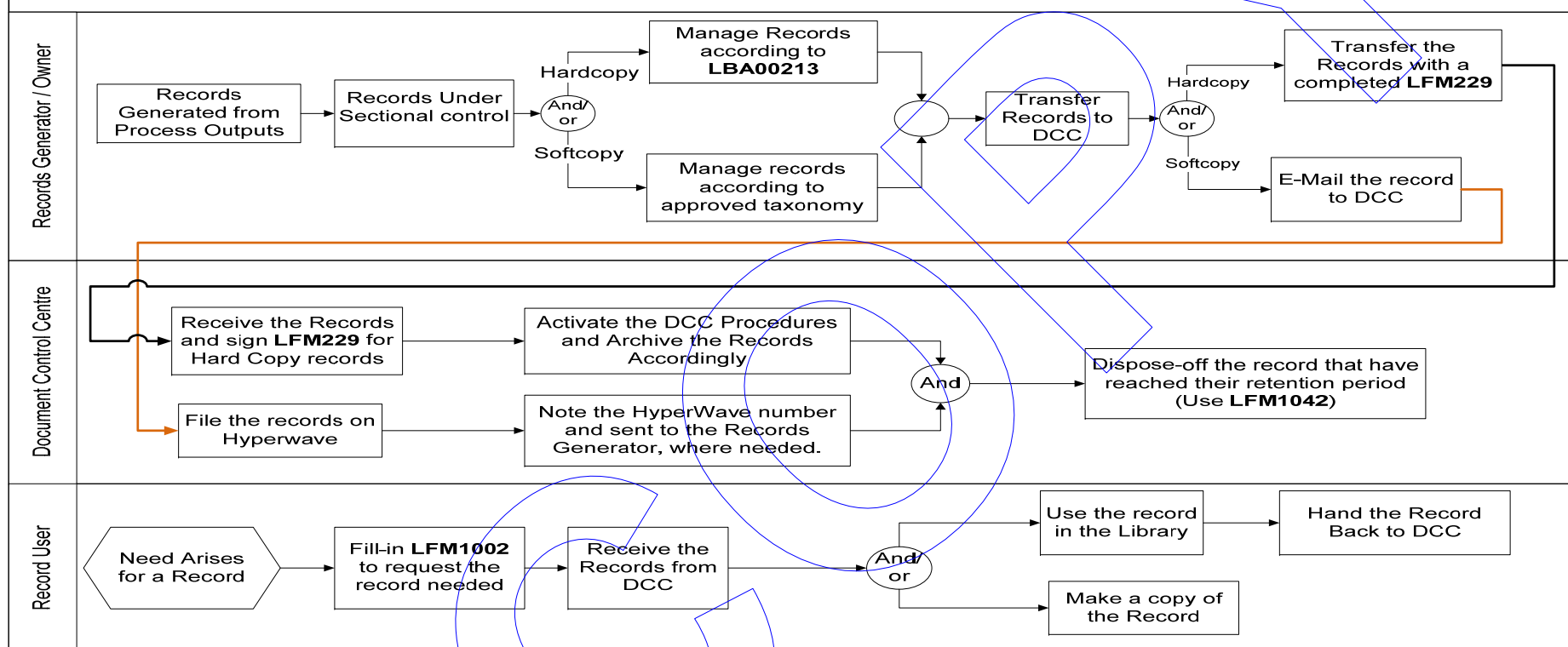
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8.8 Appendix H: Control of Records process flow

CONTROL OF RECORDS PROCESS FLOW CHARTS

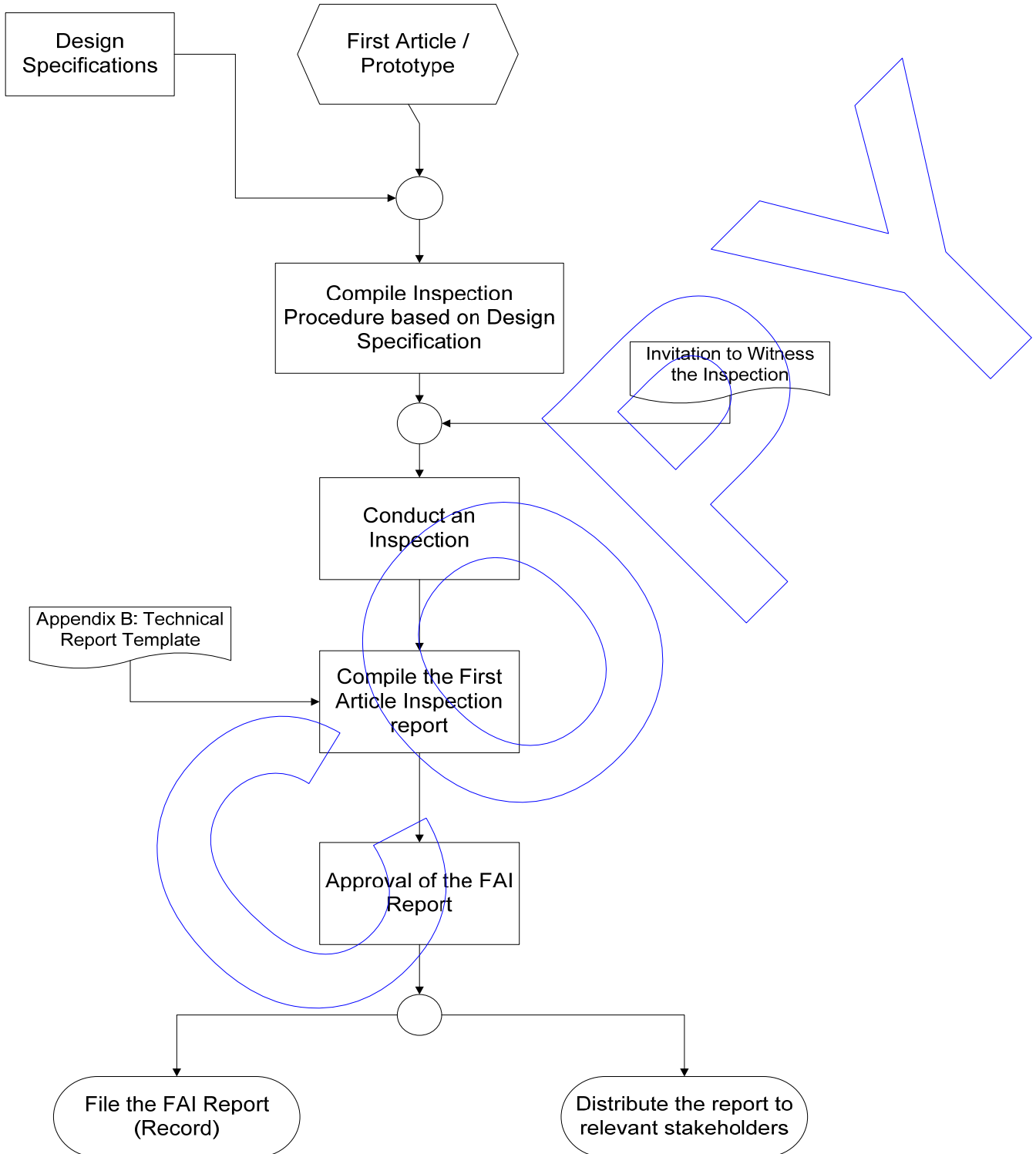
Reference Work Instruction: LBQ21002



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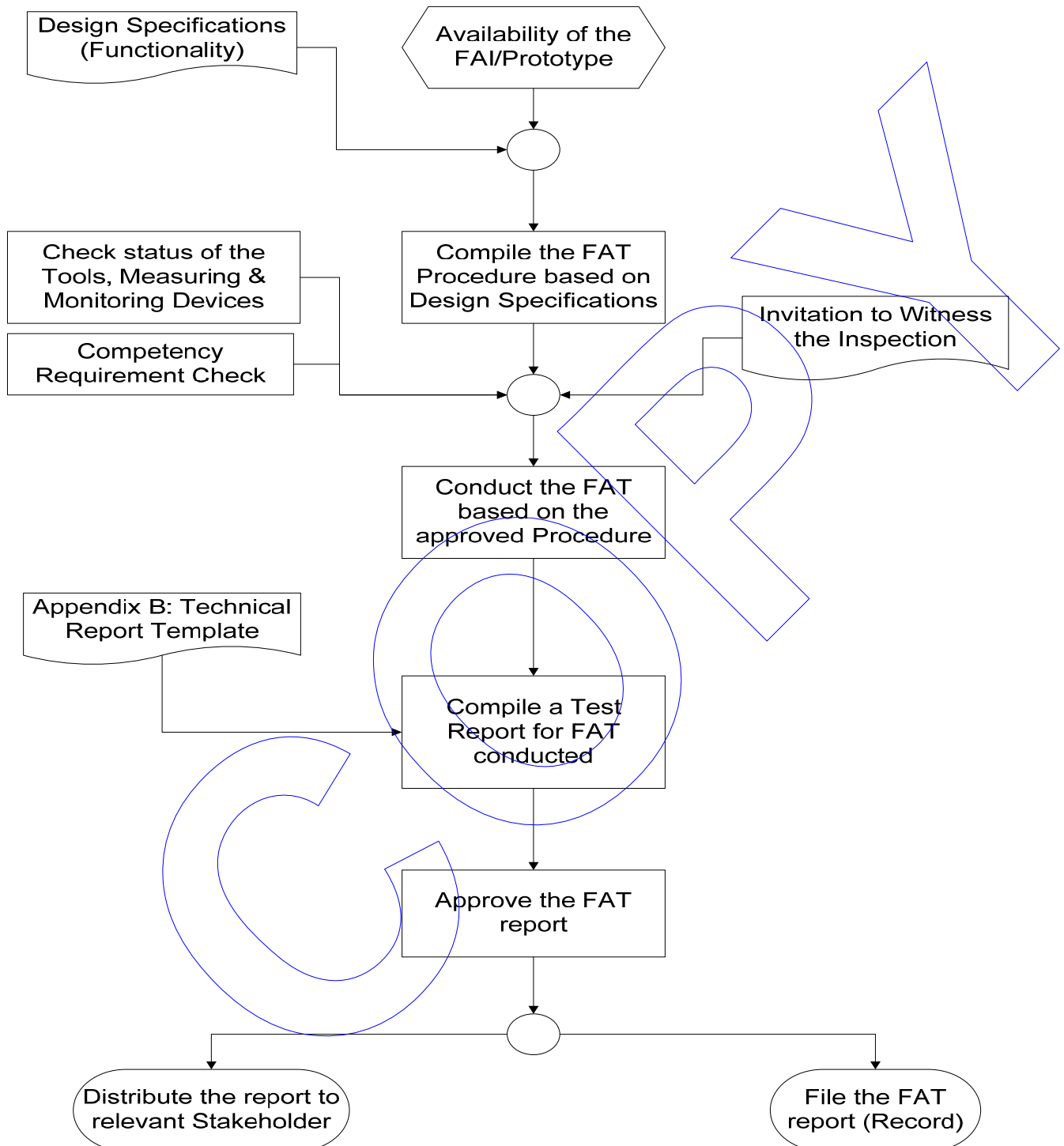
8.9 Appendix I: First Article Inspection (FAI)



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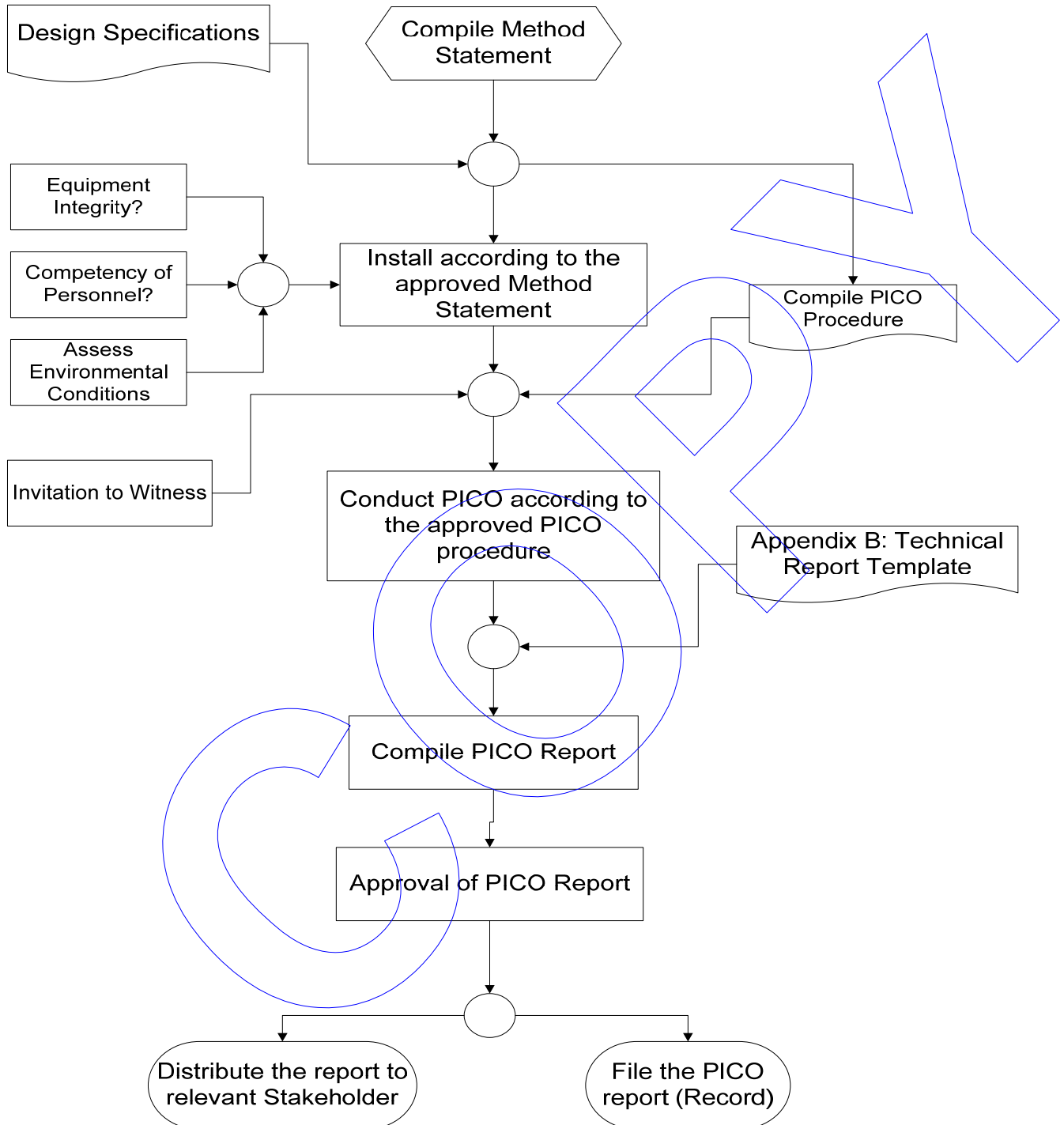
8.10 Appendix J: Factory Acceptance Test (FAT)



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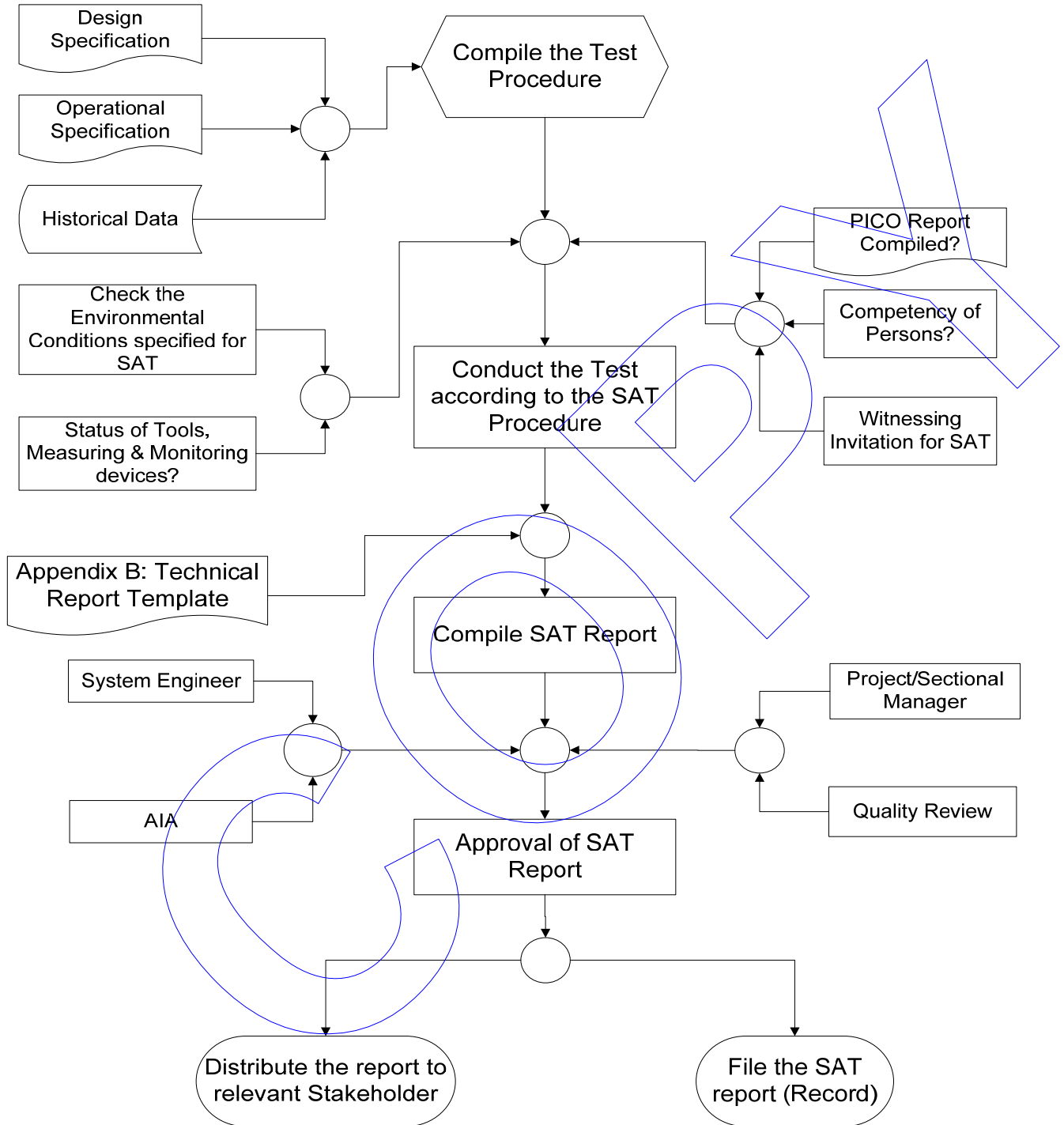
8.11 Appendix K: Post Installation Check Out (PICO)



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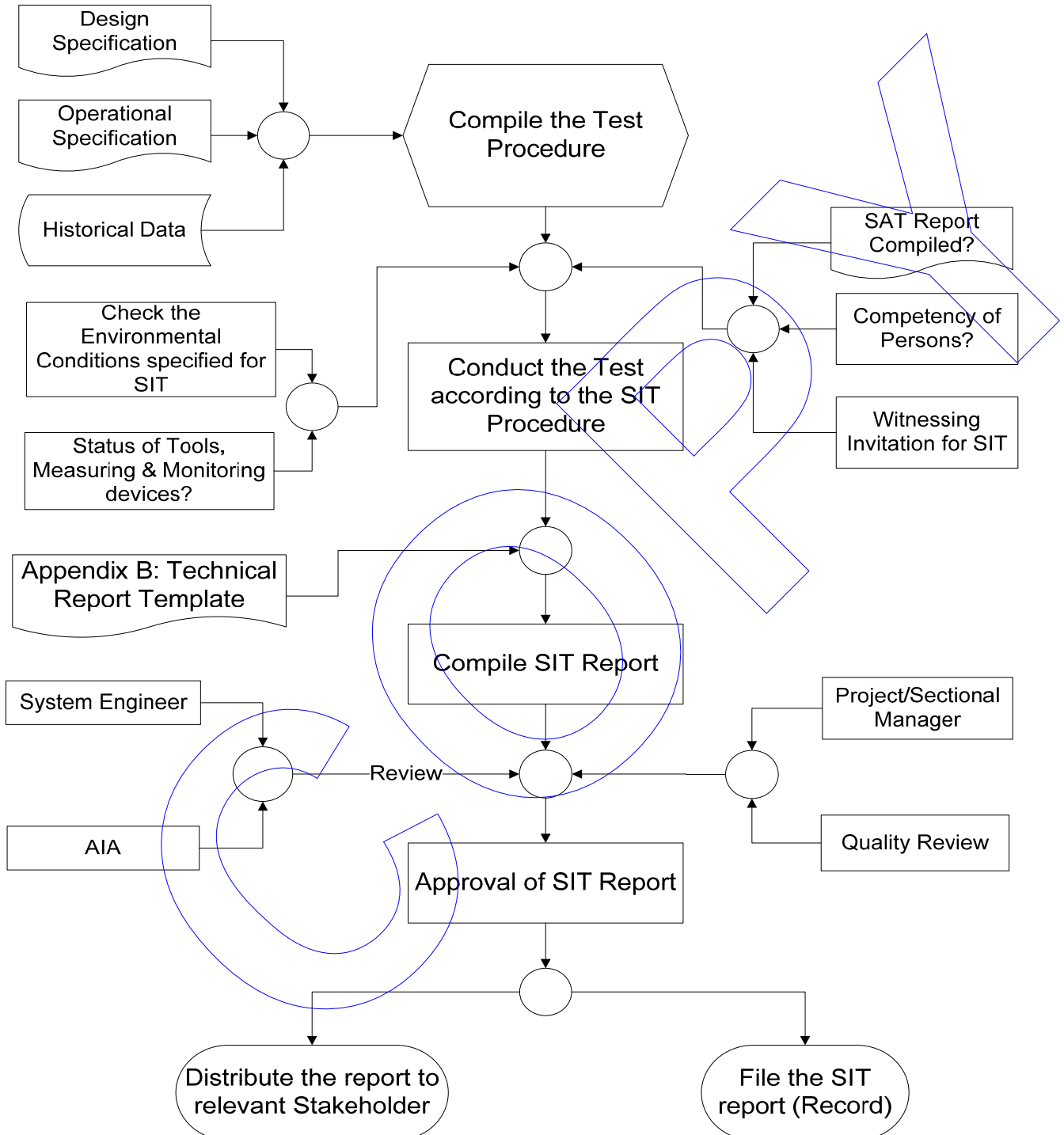
8.12 Appendix L: Site Acceptance Test (SAT)



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8.13 Appendix M: System Integrated Test (SIT)



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Strategy for Managing Contract and Project Quality

Unique Identifier: **240-69164839**
 Alternative Identifier: **LBQ25006**
 Document Type: **WN**
 Revision: **03**
 Page: **34 of 37**

8.14 Appendix N: Punch\Snag List Register

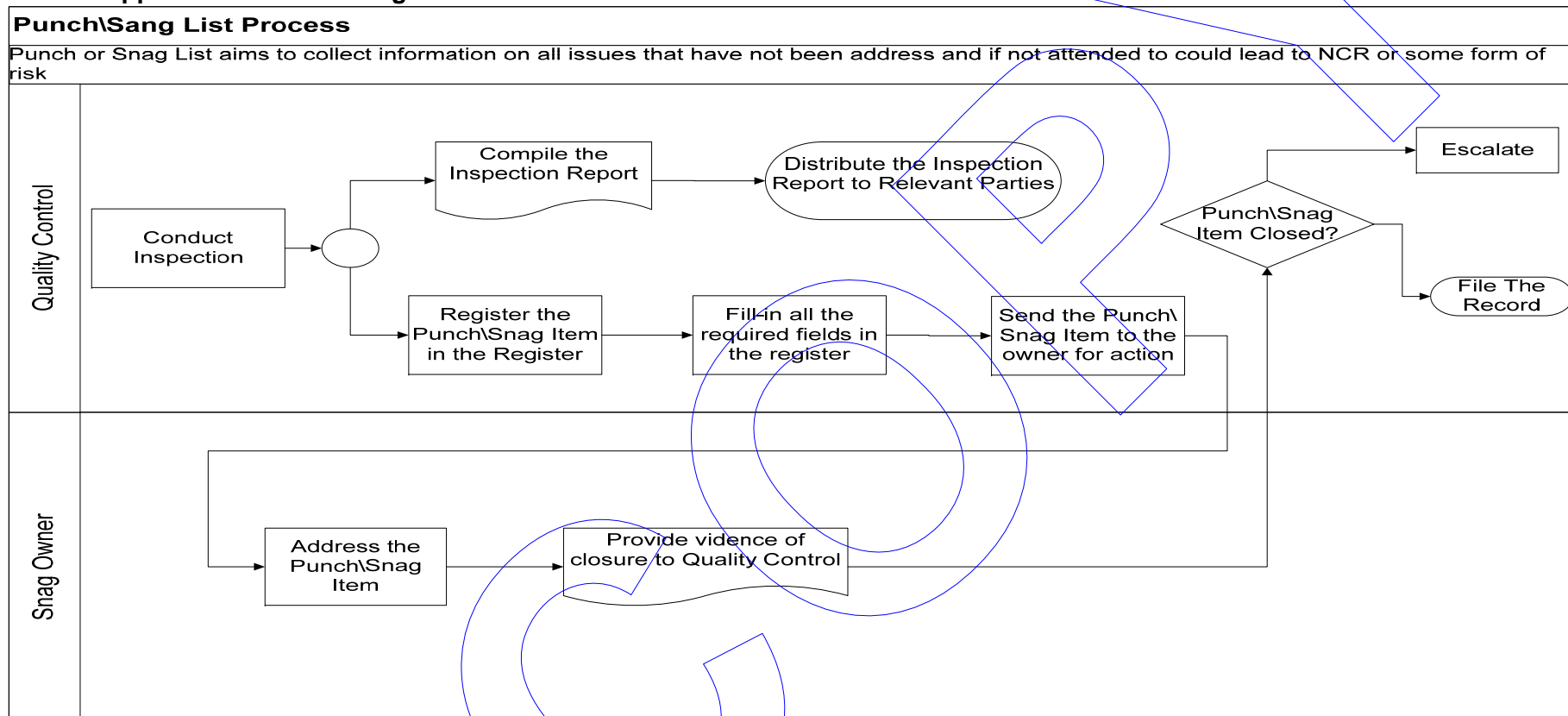
CH-1 Appendix N-1 Punch and Snag List Register

| PUNCH \ SNAG LIST REGISTER | | | | | | | | | | | | | | |
|----------------------------|------|------------|--------|----------------|------------------|--------------|----------------|---------------|-------------------|----------------------------|--------------------|----------------------|------------------------|--------|
| # | Unit | Plant Area | System | Equipment Name | Equipment Number | Inspected by | Date Inspected | Report Number | Report Risk Level | Details of Snag/Punch Item | Responsible Person | Plan Resolution Date | Actual Resolution Date | Status |
| 1 | | | | | | | | | Low | | | | | |
| 2 | | | | | | | | | Medium | | | | | |
| 3 | | | | | | | | | High | | | | | |
| 4 | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | |

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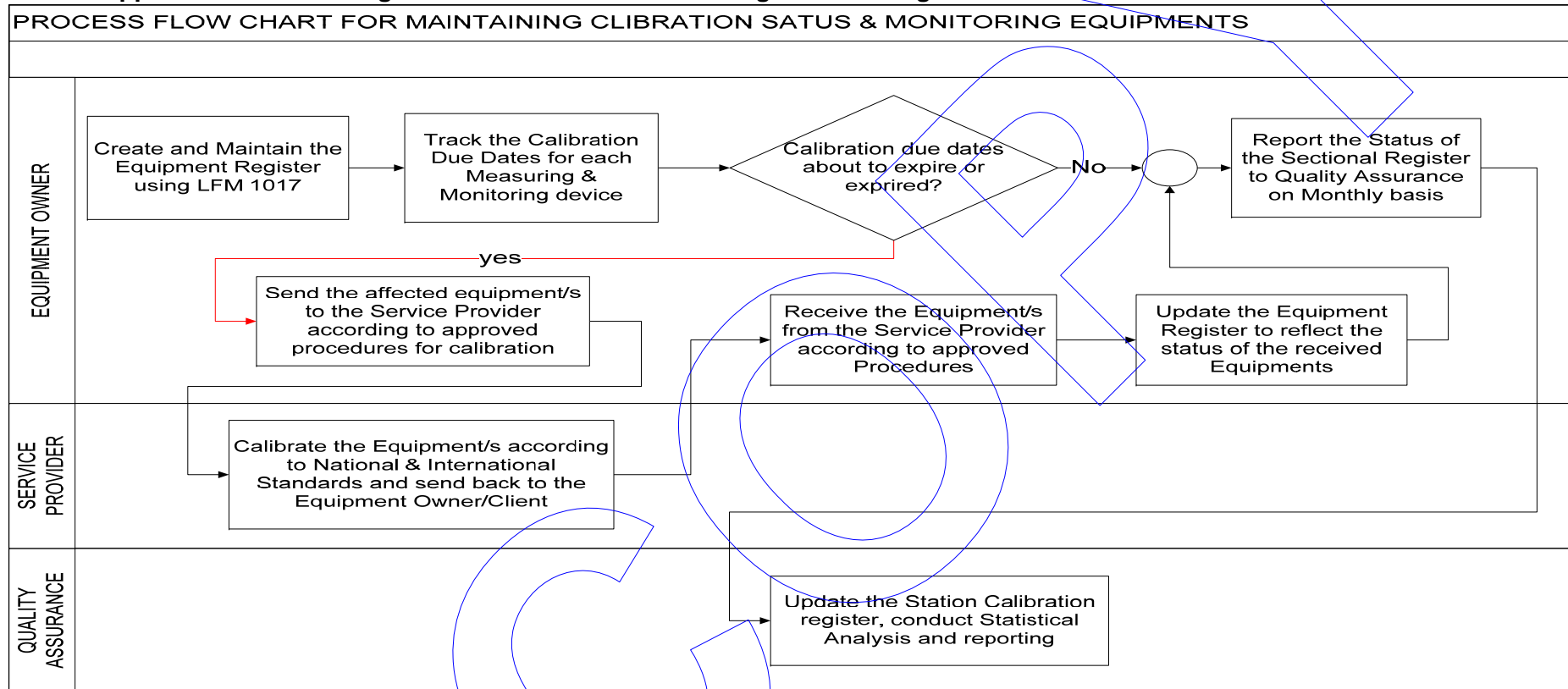
8.15 Appendix O: Punch\Snag Process Flow Chart



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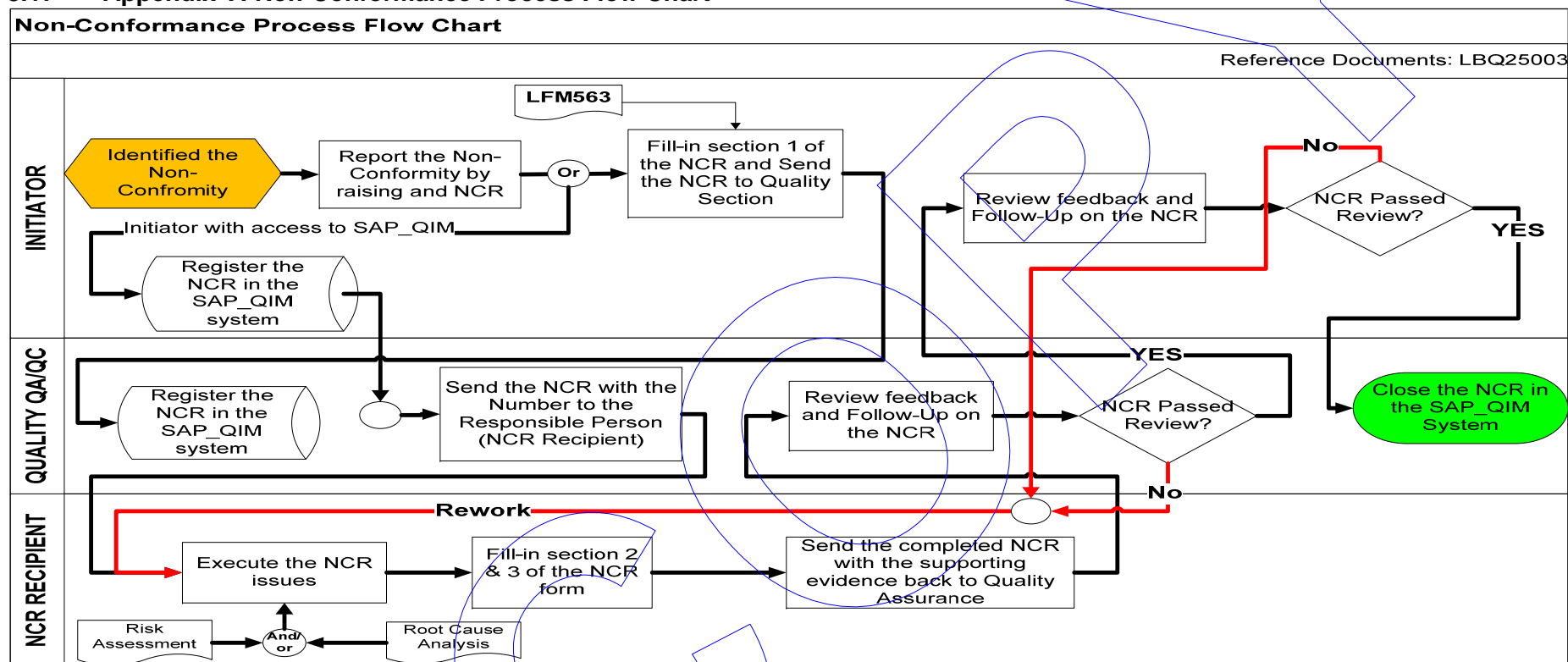
8.16 Appendix U: Maintaining Calibration status of Measuring & Monitoring devices



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8.17 Appendix V: Non-Conformance Process Flow Chart



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