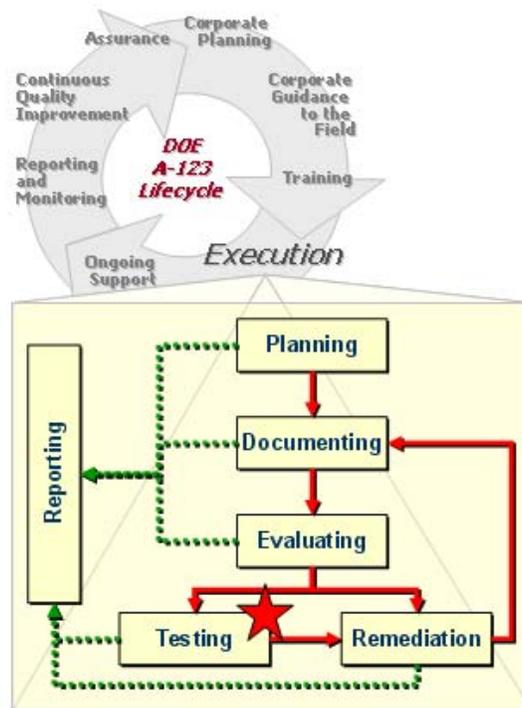




Quick Start Guide (QSG) 4 - Testing



| | |
|--------------------|---|
| Purpose | <ul style="list-style-type: none"> • Validate the operational effectiveness of internal controls over financial reporting related to departmental financial statements. |
| Key Activities | <ul style="list-style-type: none"> • Identify existing tests that can be leveraged • Develop test plans • Conduct dual-purpose testing • Rate and record test results |
| Required Templates | <ul style="list-style-type: none"> • AART Tool Suite • Implementation Plan |

<http://www.cfo.doe.gov/progliaison/daeA123/index.htm>

A-123Helpdesk@hq.doe.gov



Quick Start Guide 4 – Testing

Users who have completed an A-123 cycle in FY06 may have already completed many of the activities described herein. However, the Testing guide should be reviewed to ensure that FY07 guidance is incorporated into your A-123 Implementation

 The examples throughout these guides are based on a Procure to Pay (P2P) process cycle scenario, within a government agency. The business cycle from Requisitioning goods and services through to Payment of invoices is used to exemplify inherent process risks and controls, as well as inherent entity risks and controls within a large organization.

End note references are provided with more detailed information at the end of the guide.

DOCUMENT LEGEND

| | |
|--|--|
|  Note box |  AART Input Color schemes indicate tab entry |
|  Requirements box |  → Detailed Documentation Requirements |
|  Tip box | |



Quick Start Guide 4 – Testing

INTRO

OBJECTIVE

Validate the operational effectiveness of control sets in mitigating occurrence of related risks.

SCOPE

Testing scope is limited to control sets that are effectively designed or have minor design deficiencies (rated as 5 or 6). All deficient control sets (rated as 3 or 4) will require remediation prior to testing and will be indicated with "REM" in the ECS/PCS Test tab in the "Control Design Effective" and "Risk Assessment" columns.

DUAL PURPOSE TESTING

A-123 employs a dual purpose testing approach. There are two steps to using dual-purpose testing:

1. Determining whether a control failure occurred (i.e., during control operation); and,
2. Determining whether the risk actually occurred (and its subsequent impact) as a result of the control failure, where reasonable and appropriate.

Sites should perform additional procedures, as necessary, to implement the use of dual purpose testing.

RATINGS

A consistent rating scheme has been developed to support capturing testing results of the operational effectiveness of control sets at the risk level as well as the summary (area/process) and assurance levels.

The following table provides an explanation of the ratings for each of the above areas.



Quick Start Guide 4 – Testing

| | Control Set (Design) | Control Set (Testing) | Summary Ratings (PCS Process, ECS Area, ECS Overall Environment) | Assurance Ratings |
|---|---|--|---|--|
| 3 | <p><u>Significant Design Deficiency</u> Significant deficiency(ies) in the control set design exist such that there is a HIGH probability of the risk occurring. This may adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Significant Operational Deficiency</u> Significant deficiency(ies) in the control set operation exists such that there is a HIGH probability of the risk occurring. This may adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Significant Deficiency</u> Control deficiency(ies) (design or operational) exist that create a HIGH probability of not detecting or preventing fraudulent and/or erroneous transactions WITH a <u>significant exposure</u> to unreliable, inaccurate and/or untimely financial reporting.</p> | <p><u>Material Weakness</u> More than a <u>remote</u> likelihood for a misstatement of financial statements and reports AND the misstatement may be of a <u>material magnitude</u>.</p> |
| 4 | <p><u>Design Deficiency</u> Deficiency(ies) in the control set design exist such that there is MORE than a remote possibility of the risk occurring. This may adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Operational Deficiency</u> Deficiency(ies) in the control set operation exists such that there is MORE than a remote possibility of the risk occurring. This may adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Deficiency</u> Control deficiency(ies) (design or operational) exist that create a MODERATE probability of not detecting or preventing fraudulent and/or erroneous transactions WITH a <u>significant exposure</u> to unreliable, inaccurate and/or untimely financial reporting.</p> | <p><u>Reportable Condition</u> More than a <u>remote</u> likelihood for a misstatement of financial statements and reports AND the misstatement may be of a <u>more than inconsequential</u> magnitude.</p> |
| 5 | <p><u>Minor Design Deficiency</u> Deficiency(ies) in the control set design exist such that there is ONLY a <u>remote possibility</u> of the risk occurring. This may not adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Minor Operational Deficiency</u> Deficiency(ies) in the control set operation exists such that there is ONLY a <u>remote possibility</u> of the risk occurring. This may not adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Minor Deficiency</u> Control deficiency(ies) (design or operational) exist that create a LOW probability of not detecting or preventing fraudulent and/or erroneous transactions OR an insignificant exposure to unreliable, inaccurate and/or untimely financial reporting.</p> | <p><u>Control Deficiency</u> A <u>remote</u> likelihood for a misstatement of financial statements and reports OR the misstatement may be of an <u>inconsequential magnitude</u>.</p> |
| 6 | <p><u>Designed Effective</u> Control set design is <u>effective</u> such that there is LESS than a remote possibility of the risk occurring. This should not adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | N/A | <p><u>Designed Effectively</u> Controls are designed <u>effectively</u> to detect and/or prevent fraudulent and erroneous transactions AND ensure reliable, accurate and timely financial reporting.</p> | <p><u>Effectively designed controls</u></p> |
| 7 | N/A | <p><u>Operating Effectively</u> Control set is operating <u>effectively</u> such that there is LESS than a remote possibility of the risk occurring. This should not adversely affect the organization's ability to meet its internal control objectives for the specified risk.</p> | <p><u>Operating Effectively</u> Controls are operating <u>effectively</u> to detect and/or prevent fraudulent and erroneous transactions AND ensure reliable, accurate and timely financial reporting.</p> | <p><u>Effectively operating controls</u></p> |



Quick Start Guide 4 – Testing



Because of the similarity of the testing methodology for both Entity and Process controls, they are discussed together in this guide, but providing examples for both.

TESTING

A. Define overall testing approach

1. Prioritize your testing approach based on:
 - a. Risk Assessment
 - b. Control Design Effectiveness ratings
 - c. Logical groupings of controls/control sets within a test scenario
 - d. Resource availability
 - e. Complexity of testing protocol
 - f. Timing of related transactions/activity to be tested
 - g. Periodicity of control execution (when can they be tested)
 - h. Other site specific considerations

2. Determine if any testing has recently been performed that may satisfy the A-123 requirements for selected controls within a control set. To satisfy A-123 requirements:
 - a. Testing must have been performed within 12 months of the assurance date
 - b. Tests must directly address the key controls and the related risk identified in the AART
 - c. No significant system, process or control changes should have taken place since the date of testing
 - d. Documentation must include key attributes including, type of test, sample size, sampling criteria, universe, timing of execution, actual results, number and nature of exceptions/errors identified, etc.

An independent interpretation of the results must still be documented in the Detailed A-123 Documentation.



Sites may utilize testing performed as part of internal or external reviews and/or audits (e.g. FFMIA, FMFIA, SAS-70, IG/GAO audits).

*Sites may not utilize financial statement audits as a basis in determining that controls are operating **effectively**. However, if those audits identify controls that are **not operating effectively**, and management agrees, these results may be relied upon to place the controls in remediation.*

3. Attester should determine if additional testing guidance is required to set testing standards to support his required level of assurance. Such guidance might include,
 - a. Minimum sample sizes
 - b. Maximum acceptable error rates
 - c. Additional documentation requirements
 - d. Independent standards for test performance



Quick Start Guide 4 – Testing

B. Develop test strategy and plans

1. Develop a test strategy for each process, supported by test plans for each control set. The strategy would consider:
 - a. Ability to consolidate testing of multiple controls within and or between control sets.
 - b. How to validate quality and completeness of all required testing for each process.
 - c. Approach for weighting of results for specific control sets.
 - d. Additional guidance provided by the attester



A-123 Detailed Documentation

2. Develop and document test plans for each control set as part of the Detailed A-123 Documentation. The plan should define specific test activities to address each control within the control set. Some of the key elements of the test plan include:
 - a. Description of objective
 - b. Type of test
 - c. Procedures of the test being performed
 - d. Acceptable error thresholds
 - e. Explanation of the extensiveness of tests
 - f. Universe from which the sample size was selected
 - g. Sample size
 - h. Timeframes of execution
 - i. Resources assigned
 - j. Date executed
 - k. Approver
 - l. Who performed the test

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- f. Universe from which the sample size was selected
- g. Sample size
- h. Timeframes of execution
- i. Resources assigned
- j. Date executed
- k. Approver
- l. Who performed the test

3. Record a summary description¹ of the test plan, associated with each control set, in the ECS/PCS Test tab of the AART. At a minimum, include:



ECS / PCS Test

| Flow No. | Process Cycle | Processes | Sub-Processes | Controls | Risk Ass+++ | Ctrl Dgrn | Type of I | Test Description | Test C | Da |
|----------|--------------------|------------|--|----------|-------------|-----------|--|------------------|--------|----|
| P2P | Payable Management | Disbursing | <ul style="list-style-type: none"> The Vendor Numbers are matched to the CCR database on a regular basis. Reports are generated weekly with the expiration dates, and those approaching expiration dates with open contracts are highlighted. This report is sent to all pertinent parties. Follow up workflow notifications are sent as expiration dates approach. When an invoice is posted to a Vendor with an expired CCR number, the invoice is blocked for payment and notification sent to appropriate personnel for follow up. An Accounts Payable aging report is run listing invoices that are not paid with reason code stating that CCR is expired. | L | S | R | <ul style="list-style-type: none"> Invoices were posted to vendor accounts whose CCR numbers had expired. Invoices were automatically blocked for payment with the reason code that the CCR number had expired. The weekly reports listed the accounts payable invoices that were blocked with the vendor name and number that had an expired CCR #. Automatic workflow notifications were sent to proper internal parties advising them of blocked invoices. Invoices were listed on Accounts Payable aging reports with blocking indicator. The CCR number was renewed, and the invoice was subsequently released for payment. | | | |
| P2P | Payable Management | Disbursing | <ul style="list-style-type: none"> When contracts are entered in the system of record, payment terms are checked against those stored in the vendor record. If the payment terms are different from the vendor record, a message is generated instructing entry clerk to check payment terms. New payment terms are entered and stored in the vendor record for future use. A report is generated that lists contracts that override information from the Supplier Master record and is sent to the Department Head for review. Payment terms cannot be overridden when the | L | S | D | <ul style="list-style-type: none"> Invoices were posted to vendor accounts with payment terms other than those listed in the vendor records. A warning message was displayed every time. The users were provided with the option to accept and override or revert back to vendor record payment terms. The exception report listing these differences was reviewed weekly. | | | |



Quick Start Guide 4 – Testing

C. Execute test plans



A-123 Detailed Documentation

1. Execute the test plans. Update the plans in the Detailed A-123 Documentation with all relevant details and findings. This should, at a minimum, include:
 - a. Date test executed
 - b. Description of test findings
 - c. Name(s) of person(s) performing test
 - d. Any variations to the test plan attributes (e.g. the sample size was changed from 65 to 100)
 - e. Number and percentage of failures
 - f. Nature of failures
 - g. Occurrence of risk and frequency of occurrence (where applicable)



ECS / PCS Test

2. Record the test date and the location of the Detailed A-123 Documentation in the applicable columns of the ECS/PCS Test tab in the AART.

| AART: PCS Test | | | | | | | | | |
|---|---------------|--------------------|---------------|---|--------------|----------------|------------------------|---|------|
| Select View: <input type="text" value="Select view"/> | | | | | | | | | |
| FO: CH | | | | | | | | | |
| Attester: Constance Genie | | | | | | | | | |
| Implementer: | | | | | | | | | |
| Date Updated: | | | | | | | | | |
| Row No. | Process Cycle | Processes | Sub-Processes | Controls | Test Results | Date Test Comp | Test Results Rationale | Documentation Location (where documentation is filed) | User |
| | P2P | Payable Management | Disbursing | <ul style="list-style-type: none"> The Vendor Numbers are matched to the DCR database on a regular basis. Reports are generated weekly with the expiration dates, and those approaching expiration dates with open contracts are highlighted. This report is sent to all pertinent parties. Follow up work flow notifications are sent as expiration dates approach. When an invoice is posted to a Vendor with an expired DCR number, the invoice is blocked for payment and notification sent to appropriate personnel for follow up. An Accounts Payable aging report is run listing invoices that are not paid with reason code stating that DCR is expired. | | 01/10/06 | | <ul style="list-style-type: none"> Hard copies are maintained in the Accounts Payable Department. Both copies are filed on the Shared Drive. Copies of e-mail notifications are filed on the Shared Drive. | |
| | P2P | Payable Management | Disbursing | <ul style="list-style-type: none"> When contracts are entered in the system of record, payment terms are checked against those stored in the vendor record. If the payment terms are different from the vendor record, a message is generated instructing entry clerk to check payment terms. New payment terms are entered and stored in the vendor record for future use. A report is generated that lists contracts that override information from the Supplier Master record and is sent to the Department Head for review. Payment terms cannot be overridden when the | | 01/10/06 | | <ul style="list-style-type: none"> Hard copies are maintained in the Accounts Payable Department. Both copies are filed on the Shared Drive. Copies of e-mail notifications are filed on the Shared Drive. | |



Quick Start Guide 4 – Testing

D. Evaluate test results

1. Evaluate the test results and rate the effectiveness of the control set operation in mitigating the risk associated with the specified risk statement. In rating the operational effectiveness, you should consider, among other things:
 - a. Whether operational failures occurred
 - b. Number of controls in the control set
 - c. How many controls failed
 - d. How many failures occurred for specific controls
 - e. Risk assessment rating
 - f. Nature of the control failures
 - g. Whether control failures resulted in Risk occurrence
 - h. Type of control
 - i. Combined performance of Primary and Backup controls
 - j. Risk Assessment rating
 - k. Relative exposure
 - l. Potential for risk occurrence

Example:

A well formulated rationale: Control set operates effectively – Rating 7 / Testing covered six key controls designed to mitigate the associated risk. While control failures were identified in one of the key controls, the number of failures were below the maximum acceptable error threshold. In addition, the control set contained multiple preventive and detective controls that worked effectively to offset the control failures. Based on these results, the control failure will not negatively impact the overall operation of the control set and will not increase the likelihood of risk occurrence beyond 'less than remote'.

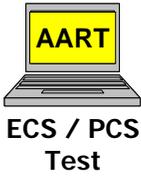


A-123 Detailed
Documentation

2. Record in your Detailed A-123 Documentation the rationale used in determining the test results ratings.



Quick Start Guide 4 – Testing

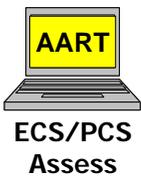


- Record the rating and a summary of the rationale into the ECS/PCS Test tab of the AART.

After a control set has been tested, ***DO NOT*** go back into the ECS or PCS Assess worksheets and change the Control Design Effectiveness rating based on test results.

| AART: PCS Test | | | | | Version | 4.0 | |
|---|---------------|--------------------|---------------|--|-------------|--------------|---|
| Select View: <input type="text" value="Select view"/> | | | | | | | |
| FO: CH | | | | | | | |
| Attester: Constance Gerne | | | | | | | |
| Implementer: | | | | | | | |
| Date Updated: | | | | | | | |
| Row No. | Process Cycle | Processes | Sub-Processes | Controls | Test Report | Test Results | Test Results Rationale |
| | P2P | Payable Management | Disbursing | <ul style="list-style-type: none"> The Vendor Numbers are matched to the CCR database on a regular basis. Reports are generated weekly with the expiration dates, and those approaching expiration dates with open contracts are highlighted. This report is sent to all pertinent parties. Follow up workflow notifications are sent as expiration dates approach. When an invoice is posted to a Vendor with an expired CCR number, the invoice is blocked for payment and notification sent to appropriate personnel for follow up. An Accounts Payable aging report is run listing invoices that are not paid with reason code stating that CCR is expired. | 7 | 10/10/06 | <ul style="list-style-type: none"> The block of invoices was an automatic, preventive control. The subsequent reports provide detailed information that the CCR # and the workflow notifications ensure the responsible party is notified to contact the vendor and take steps to correct the situation. |
| | P2P | Payable Management | Disbursing | <ul style="list-style-type: none"> When contracts are entered in the system of record, payment terms are checked against those stored in the vendor record. If the payment terms are different from the vendor record, a message is generated instructing entry clerk to check payment terms. New payment terms are entered and stored in the vendor record for future use. A report is generated that lists contracts that override information from the Supplier Master record and is sent to the Department Head for review. | 5 | 10/10/06 | <ul style="list-style-type: none"> The warning was displayed each time an invoice was posted using payment terms other than those in the vendor master record. However, the users would readily bypass the warning without checking the message. May want to block the invoice for payment to ensure the user actually checks the payment terms. |

E. Evaluate and update the Area and Process level ratings to reflect the results from testing



- Define the Area/Process level ratings based on the results of testing at the control set level. In determining the operational control effectiveness of the controls at the Area and Process Level, consider among other things the effectiveness ratings for each control set and their relationship to the respective risk assessment rating. Also, consider exposure to the Area/Process level and the potential for risk occurrence.



Quick Start Guide 4 – Testing

SUPPLEMENTARY INFORMATION AND DEFINITIONS

¹ Well formulated summary test description are as follows:

| | |
|---|--|
| Area: Control Activity | Sub-Category: Segregation of Duties |
| Risk Statement: An employee who creates a requisition and also approves the requisition, purchases the requested goods or services, and pays the subsequent invoice(s), resulting in fraud, waste, and / or abuse of government funds. | |
| Objective: Validate operation of entity controls to ensure segregation of duties as they impact the requisitions area. | |
| Control Set: To prevent fraud, waste and/or abuse | |
| Control (1) Management publishes an internal control manual (distributed to all employees) that requires segregation of duties in all financial activities. [P] [M] | |
| Control (2) Security rules are set up such that no single user ID can be assigned the roles of creating a requisition and approving that requisition; approving a requisition and creating the corresponding Obligation; and creating the obligation and paying the invoice. [P] [A] | |
| Control (3) Workflow technology is implemented to automate work flow message distribution to monitor expenditures and approvals. [P] [A] | |
| Control (4) Only 3 Administrators have the authorization to create and / or change security profiles and workflow rules. [P] [M] | |
| Test Type: Mixed (See test description) | |
| Test Description: | |
| <u>Test 1 (Control 1) – Observation/Inquiry – Observe whether requisitioning employees & managers are in possession of the manual and Inquire as to their knowledge of the segregation of duties requirement.</u> | |
| <u>Test 2 (Control 2) – Re-perform – Re-perform steps to create a unique user ID and attempt to assign multiple roles.</u> | |
| <u>Test 3 (Control 3) – Inspection – Inspect workflow e-mails received by two approving officials and reconcile to a report indicating number of requisitions approved to validate e-mail issuance and receipt.</u> | |
| <u>Test 4 (Control 4) – Inspection – Inspect role assignment logs from workflow system to verify the number of administrators with create/change rights. (as of 10/1/05, 1/30/06 and 9/5/06)</u> | |

Sample Test Plan Criteria for entity (scenario above):

| Test # | Universe | Sample Size | Acceptable Error Threshold | Date Executed | Tester (s) | Approver |
|--------|----------------------------|---------------------------|----------------------------|--------------------|------------------|----------|
| 1 | 20 Employees 5 Managers | 4 Employees 1 Manager | 0 | 9/1/06 – 9/3/06 | Miller/ Davis | Harris |
| 2 | N/A | 1 | 0 | 9/4/06 | Davis | Harris |
| 3 | 5 AOs 50 Reqs | 2 AOs 20 Reqs | 0 | 9/4/06 | Milled | Harris |
| 4 | N/A | 3 logs per test descr. | 0 | 9/5/06 | Miller/ Davis | Harris |



Quick Start Guide 4 – Testing

Process: Payable Management

Sub-Process: Disbursing

Risk Statement: Duplicate payments may be made, resulting in overpayments causing extra costs and / or potential loss to the government for unrecoverable overpaid funds.

Objective: Validate the operation of manual and system process controls to avoid duplicative payments.

Control Set: To prevent loss of funds.

Control (1) System rejects entry of duplicate invoice numbers. [P] [A]

Control (2) System issues a warning if invoice numbers are different and amounts and payee are the same. [P] [A]

Control (3) Monthly report of potentially duplicate invoices is generated and reviewed by AP Supervisor. [D] [M]

Test Type: Mixed (See test description)

Test Description:

Test 1 (Control 1) – Observation/Re-performance – Perform steps necessary to enter a duplicate invoice number for payment and observe functionality of control.

Test 2 (Control 2) - Observation/Re-performance – Perform steps necessary to enter an invoice for payment with a unique invoice number, but amounts and payee are the same as a previous invoice on the contract and observe whether a warning is displayed by the system.

Test 3 (Control 2) – Observation – Observe an accounting technician and verify that they perform proper checks to ensure that payments are not duplicates prior to overriding the warning message.

Test 4 (Control 3) – Inquiry/Inspection – Inquire whether AP supervisor is receiving the monthly report of potentially duplicative invoices and inspect files to identify evidence that the report was reviewed and annotated with results of the monthly review.

Sample Test Plan Criteria for process (scenario above):

| Test # | Universe | Sample Size | Acceptable Error Threshold | Date Executed | Tester (s) | Approver |
|--------|---------------------|-------------|----------------------------|---------------|--------------|----------|
| 1 | N/A | 1 | 0 | 9/1/06 | Miller/Davis | Harris |
| 2 | N/A | 1 | 0 | 9/2/06 | Davis | Harris |
| 3 | 2 Techs | 1 Tech * | 0 | 9/3/06 | Milled | Harris |
| 4 | 12 Reports per Year | 3 Reports | 0 | 9/4/06 | Miller/Davis | Harris |

NOTE: Sample size depends on the number of invoices meeting the criteria processed during the day of testing.