

# Internal Controls Flash Cards

### What is an Internal Control?

Any activity that you perform to ensure that what you want to happen, happens. And what you don't want to happen, doesn't happen.

### **Examples of common Internal Controls:**

- Lock your car when you exit it
- Keep copies of important papers in a safe place
- Use passwords on your computer
- SCADA Alarms
- Procedures, processes and training



## Key:

- Control Objective: Indicates the purpose of the control
- Control Activities: Activities to improve/strengthen a control
- ERO/RF Risk Elements: Suggestions of possible relevant risk elements that the internal control might help to mitigate. The applicable risk element(s) will be "highlighted" within the table.

	Internal Control	Catchphrase	Objective
Prevent	Access Controls	On a need basis	Selectively restrict access to a place or other resource.
	Analysis Controls	Analyze data to ensure reliability	Analyze the results of data review to discover us eful information, identify approaches considered and discarded, and understand the rationales used to reach all conclusions.
	Asset Management	Identify, define, and track assets	Maximize assets to provide the best returns to stakeholders by establishing an inventory of assets and defining their attributes. Ensure controls exist to cover any acquisitions or mergers.
	Change Management	Set a methodological process for change	Ensure that no unnecessary changes are made, all changes are documented, and services are not unnecessarily disrupted and that resources are used efficiently.
	Contract (3 <sup>rd</sup> ) Party Management	Ensure contract accuracy and performance	Document controls that evaluate how an entity manages: communication, commitments, document review and retention regarding contracted work.
	Documentation	Formalized, standardized format	Formalize or standardize forms, reports, checklists that identify critical steps within a process that lead to its success.
	Implementation Control	Plan. Do. Track effectiveness	Carry out, execute, or practice a plan, method, or design, i dea, model, specification, Standard or policy.
	Integration Control	Identify all affected parties/components	Establish lists of inputs and outputs that impact risks to grid reliability. Bringing together sub-systems, or components of a subsystem, into one system.
	Segregation of Duties	Avoid a single point of failure	Based on shared responsibilities of a key process, disperse the critical functions of that process to more than one person or department. In smaller organizations, this may be handled by a review process.
Detect	Components Inventory Management	Supply Chain Management	Track historical failure information, maintenance of a spare parts inventory, logistics, and supply chain management.
	Internal Audit	Independent, objective assurance	Review processes that present risk to an organization and ensure achievement of an entity's objectives in operational effectiveness and efficiency, reliable reporting, and compliance with laws, Standards and Requirements.
	2 <sup>nd</sup> Party Review	Independent review for accuracy	A formal process designed to review and evaluate the effectiveness of an action or system of operation.
	Verification Controls	Substantiate the aggregate	Compare two or more items, or use supplementary tests to ensure the accuracy, correctness, or truth of the information. Perform on a "Pool" of data provided for sample selection.
	Validation Controls	Test the sample	Assess an action, decision, plan, or transaction to establish that it is (1) correct, (2) complete, (3) being implemented (and/or recorded) as intended, and (4) delivering the intended outcome. Assess the degree to which (1) an instrument accurately measures what it purports to measure, or (2) a statistical technique or test accurately predicts a value.
Correct	Incident Management	Analyze events	Activities that identify, analyze and correct an event in order to restore and reconstitute services in an efficient manner and memorializes the information to expedite analysis of future events.





### **Access Controls**

### **Objective**

Selectively restrict access to a place or other resource.



#### **ERO/RF Risk Elements**

**Management of Access and Access Controls** 

**Insufficient Long-Term and Operations Planning Due to Inadequate Models** 

Loss of Major Transmission Equipment with Extended Lead Times

**Inadequate Real-time Analysis During Tool and Data Outages** 

**Improper Determination of Misoperations** 

**Gaps in Program Execution** 

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Activity #1

Establish controls for both physical and application access.

Activity #2

Define access levels, established by position.

Activity #3

Employee
promotions,
position changes, or
termination of
employee/
contractors initiate
a review.

Activity #4

Entity performs
periodic reviews of
personnel access
levels to identified
systems to ensure
appropriate access is
maintained

Activity #5

Changes due to: technology, mergers, acquisitions, infrastructure changes, etc. require a review of all position access.

### **Analysis Controls**

### **Objective**

Analyze the results of data review to discover useful information, identify approaches considered and discarded, and understand the rationales used to reach all conclusions.



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Establish
measurement
objectives
that are
clearly defined
and
documented
to perform
sound

analysis.

Activity #2

Process
provides
methodology
that describes
how/where
knowledge
(data) will be
obtained and
structures the
findings.

Activity #3

Process
includes an
established
operation for
data
collection to
ensure the
data used is
complete and
accurate.

Activity #4

Establish
process for
comparing the
data to the
objective and
methodology,
using the
conclusions to
identify actions
needed.

If the data is
not producing
desired
results or
meeting
objectives in
#4 establish a
process to
improve the
methodology.

ctivity #

Entity
documentatior
supporting the
analysis is
performed
consistently.

ctivity #7

Identify the data that needs to be communicated and to whom.

### Asset Management

### **Objective**

Maximize assets to provide the best returns to stakeholders by establishing an inventory of assets and defining their attributes. Ensure controls exist to cover any acquisitions or mergers.



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**Identify** and document assets. **Activity** 

**Define asset** and baseline attributes in order to better monitor/ maintain.

#3

Establish an asset inventory control system. Documented process including: initiating docs, approval, data entry, removal and review

A proper assessment of assets to identify any associated risks connected with use and ownership.

#22

solutions or mitigation plans for the asset-related risks ownership of

Establish a process to periodically review the asset listing.

### Change Management

### **Objective**

Ensure all changes are approved and documented, services are not unnecessarily disrupted and resources are used efficiently.



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# Activity #1

Establish a plan to identify changes to operation, operating conditions, or deviations from established baselines.

Activity #2

Establish a change approval process.

Activity #3

Develop a change implementation program that details proper coordination of approved asset changes.

Activity #4

Changes are monitored.

o fo

Oocumentation of changes, ollow the trail of the change from conception to monitoring.

Activity #6

Define an emergency change process.

## Contract (3<sup>rd</sup>) Party Management

### **Objective**

Document controls that evaluate how an entity manages: communication, commitments, document review and retention regarding contracted work.



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### #1 Activity

Establish procedures to review all contracts to ensure the contract: 1) meets Standard/Requirement,

2) achieves expected/ required outcomes, 3) details the outcome of the contract, 4) defines success factors, 5) timeline and 6) has been reviewed and approved at appropriate management level.

### #5 Activity

Establish process for vetting vendors to ensure they are qualified to implement or perform the actions and have the appropriate resources needed to perform the contracted work.

#3 Activity

Establish a process to prioritize and track all contracts currently active, with visibility of all contract milestones, commitments and obligations.

ctivity

performance goals, timely performance, implementation milestones and completion percentage.

D # ctivity

Establish a process to validate and track contract performance, proactively addressing performance gaps.

### Documentation

### **Objective**

Formalize documentation (i.e. reports, checklists, flowcharts) that identify critical steps within a process that lead to its success. Standardize documentation (i.e. templates) to ensure consistency.



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### Flowcharts:

Describe the flow of activity through a process

## ctivity #2

#### Questionnaires/ Checklists:

Structured series of questions or actions

## Activity #3

### Risk and control matrices:

Assist in documenting risks and controls for evaluation

## Activity #4

### Standardized templates:

Allows for wide scale quality assessment and improvement to practices

### (1) p

Activity #5

#10

Activity

#### **Standardized report:**

(1) permit data to be combined and tracked (2) lessen the burden on organizations

#### **Authorization:**

Approval of calculations, access to assets and records

## Activity #7

#### Situational Awareness Alarms:

Alarms optimized to maintain situation awareness of the activity on the grid.

#### # t\

### Perform an Item by item examination of two related

**Reconciliations:** 

### Walk through Process:

#### Follow a process from star to finish, to determine if a steps are being performed

### **Exception Reports:**

### Generate reports to monitor something and exceptions are followed up to resolution.

## Activity #6

Activity #1

### Implementation Control

### **Objective**

Carry out, execute, or practice a plan, method, or design, idea, model, specification, Standard or policy.



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# Activity #1

Procedures or processes address implementation and include who owns the process and the frequency of process/ procedure review.

# Activity #2

Procedure/
Process contain defined methodology to determine appropriate implementation actions.

# Activity #3

Procedure/
process identify
who will
conduct the
implementation
process and
what
qualifications are
required to
perform that
function.

# Activity #4

Procedure identifies all positions affected by the process and therefore participate in the implementation process.

# Activity #5

Identify the criteria to determine successful implementation.

# Activity #6

Monitor implementation process to ensure defined criteria are met, and implementation was successful.

### Integration Control

### **Objective**

Establish lists of inputs and outputs that impact risk to grid reliability. Bring together sub-systems, or components of a sub-system, into one system.



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## #1 Activity

Identify the various internal and external interfaces within their organization.

#5 **Activity**  internal and and the steps required for a successful integration.

**Document their** external interfaces

#3 ctivity Test the internal and external interfaces to ensure that they function correctly.

**Clearly document** testing and maintain all supporting documentation.

#2 Activity

**Document and** communicate any changes made as a result of the integration testing.

### Segregation of Duties

### **Objective**

Based on shared responsibilities of a key process, disperse the critical functions of that process to more than one person or department. In smaller organizations, this may be handled by a review process.



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## ctivity #

Establish a process/procedure to identify areas where a risk would exist if specific duties are not either segregated or reviewed by a separate party.

Activity #2

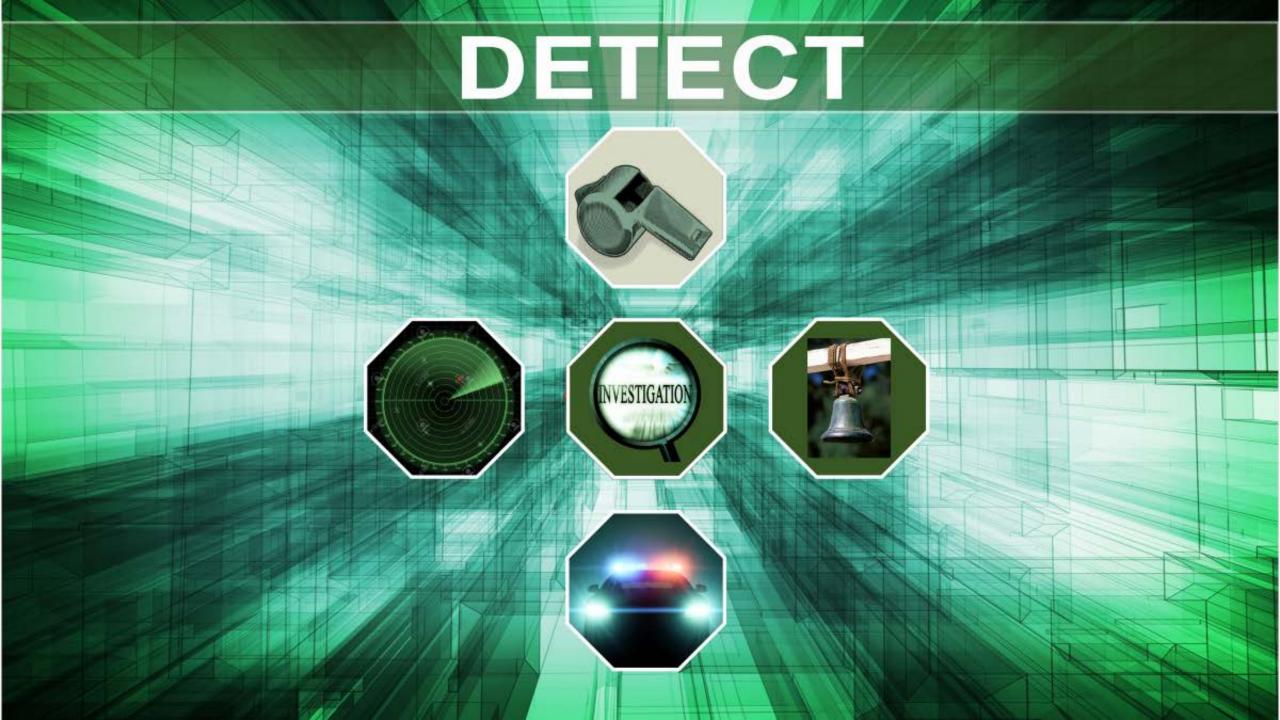
Develop process to define their segregation of duties responsibilities.

Activity #3

Changes to technology, machinery, personnel, etc. should trigger a review of established oversight processes.

Activity #4

Perform a **periodic review** to ensure all applicable risks are identified and mitigated.



## Components Inventory Management

### **Objective**

Track historical failure information, maintenance of a spare parts inventory, logistics, and supply chain management.



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# spare parts equipment.

Activity #2

Identify
equipment with
exposure to
external control
or manipulation.

Activity #3

Establish a due diligence process regarding vetting potential vendors or third parties, including transportation, logistics, lead time.

Activity #4

Vetting process is performed separately from the requestor, to remove possible conflict of interest. If not possible, includes a

Activity #5

Develop standard templates for vetting vendors to drive consistency across the company. Activity #6

Establish inventory management controls, i.e. all inventory signed for, cycle counts, tracking failures, to ensure appropriate grid maintenance.

### Internal Audit

### **Objective**

Review processes that present risk to an organization and ensure achievement of an entity's objectives in operational effectiveness and efficiency, reliable reporting, and compliance with laws, Standards and Requirements.



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# Activity #1

Develop an audit schedule based on company needs, not Regional oversight.

Activity #2

Establish
procedure/
process to ensure
the audit includes
review of
previous audits,
self-reports, etc.
to determine AoC,
PNCs,
recommendation
to be included.

Activity #3

Includes such activities as: reviewing departmental process/procedur es, evidence submittals, perform walkthroughs of complicated processes, to ensure an adequate review.

Activity #4

documented, identifying any differences in practice to how the policies are written.

Document evidence reviewed, intentiows at a

Activity #5

Senior Management reviews reports

Activity #6

Includes a detailed process for creating a mitigation plan for any gaps in compliance identified during the audit.

### 2<sup>nd</sup> Party Review

### **Objective**

A formal process designed to review and evaluate the effectiveness of an action or system of operation.



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# Activity #

Establish clear accountability and expectation regarding results of the review that detail who will perform the 2nd party review, and what they do with the results.

# Activity #2

Identify, define, and document criteria for the appropriate review precision level, to ensure the review isn't performed at too high a level as to not produce required assurance.

# Activity #3

Establish a process to determine that the data being used is accurate and complete.

Activity #4

Identify criteria to determine the reviewer has appropriate credibility needed perform the reviev

# Activity #5

Establish a formally defined and documented process to be applied accurately and consistently across the enterprise.

### **Verification Controls**

### **Objective**

Compare two or more items, or use supplementary tests to ensure the accuracy, correctness, or truth of the information. Perform on a "pool" of data provided for sample selection.



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# Activity #1

Develop a procedure/process to ensure that all relative components of the pool meet the relevant specifications. Ensure that all expected components of the pool have been identified and addressed.

# Activity #2

Entity procedure/process includes a methodology of how the test was conducted, including criteria considered to ensure the "pool" of data is complete and accurate.

Activity #3

Establish a methodology to determine whether any adverse verification results arose based on issues with its processes, verification criteria, or verification pool.

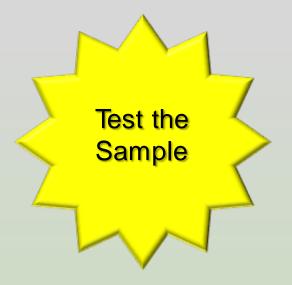
# Activity #4

Identify areas that must be considered based on the expansion/contraction of asset pools and establish a process of due diligence to identify areas where changes may have occurred.

### **Validation Controls**

### **Objective**

Assess an action, decision, plan, or transaction to establish that it is (1) correct, (2) complete, (3) being implemented (and/or recorded) as intended, and (4) delivering the intended outcome. Assess the degree to which (1) an instrument accurately measures what it purports to measure, or (2) a statistical technique or test accurately predicts a value.



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Activity #1

Establish a validation procedure that identifies the methodology for conducting the validation, as well as the validation criteria needed to meet the goals for the validation.

Activity #2

Entity performs validations according to their established procedures and criteria.

Activity #3

Validation activities have been adequately documented and supporting documents are maintained.

Activity #4

Data resulting from validation should be analyzed against the criteria to determine whether an item meets the established criteria.



### Incident Management

### **Objective**

Activities that identify, analyze and correct an event in order to restore and reconstitute services in an efficient manner and memorialize the information to expedite analysis of future events.



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# Activity #1

Establish procedure/process to restore normal service operation as quickly as possible.

Activity #2

Establish incident models or templates that allow incidents to be resolved efficiently.

Activity #3

Categorize incident types for better data gathering and problem management.

Activity #4

Agreement on incident statuses, categories, and priorities.

Activity #5

Agreement on incident management role assignment.



**ABOUT US** 

PROGRAM AREAS

KNOWLEDGE CENTER

COMMITTEES

ILIEES

HOME > KNOWLEDGE CENTER > RISK ANALYSIS > INTERNAL CONTROLS

#### INTERNAL CONTROLS

Internal Controls and Risk Management are critical in achieving operational, strategic, compliance, and reporting objectives. Comprehensive risk management identifies risks to an organization, while implemented internal controls provide reasonable assurance of the mitigation of risks and reaching operational objectives. An effective internal control program can make operations more efficient, protect company assets, and assist in compliance with NERC Standards and Requirements.

An Internal Control Program consists of five components:



COLD WEATHER PREPAREDNESS

CRITICAL INFRASTRUCTURE PROTECTION (CIP)

**ENERGY MANAGEMENT SYSTEM (EMS)** 

**HUMAN PERFORMANCE** 

INTERNAL CONTROLS

MISOPERATIONS

WORKSHOP MATERIALS & WEBINARS

GAGAS

US GAO Green Book on Internal Controls

NERC Risk-based CMEP

IIA Controls Document



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Control Environment

Foundation of the program, represents: organizational integrity, ethical values, commitment to competence, etc.