



## Environmental Management Consolidated Business Center Ash Fall Project

Control of the Electronic Management of Information

Procedure: AFP-AP-05  
Revision 0, 03/25/16

### Control of the Electronic Management of Information

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**Revision: 0**

**Effective Date is 3 days after the date of approval**

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## 1.0 PURPOSE

The purpose of this procedure is to establish the process and responsibilities for controlling the use of electronically transferred and stored information.

## 2.0 SCOPE

The scope includes all information that resides in an electronic information management system or on electronic media.

## 3.0 APPLICABILITY

This procedure applies to Environmental Management Consolidated Business Center (EMCBC) Ash Fall Project personnel and contractors that transfer and store electronic information.

## 4.0 REQUIREMENTS and REFERENCES

### 4.1 Requirements

4.1.1 EM-QA-001, *EM Quality Assurance Program (QAP)*

4.1.2 ASME NQA-1-2008/2009a, *Quality Assurance Requirements for Nuclear Facility Applications*

### 4.2 References

4.2.1 AFP-QAPP-01, *Quality Assurance Project Plan (QAPP)*

4.2.2 AFP-AP-20, *Quality Assurance Records*

## 5.0 DEFINITIONS and ACRONYMS

5.1 Database – A collection of previously distinct data (not created by the database) which have been logically organized to facilitate data access. For the purposes of this procedure, a collection of interrelated information stored together in one or more computerized data files.

5.2 Data File – An organized collection of related information, usually arranged in logical records that are stored together and treated as a unit; related numeric, textual, or graphic information that is organized in a strictly prescribed form or format.

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- 5.3 Electronic Information Management System – Computer based systems, including databases, file systems, and similar systems used to manage information.
- 5.4 Electronic Media – Media used to store, maintain, or transmit information that only a computer or other electronic device can read or process, such as floppy disks, optical disks, hard drives, and magnetic tape.

## 6.0 RESPONSIBILITIES

- 6.1 Ash Fall Project Staff
  - 6.1.1 Responsible for evaluating work activities to determine if the activities involve the use of electronic information.
  - 6.1.2 Responsible for ensuring that electronic data is appropriately stored and protected, and that transfers of data are error free.

## 7.0 GENERAL INFORMATION

- 7.1 None.

## 8.0 PROCEDURE

- 8.1 Evaluation of Work Activities
  - 8.1.1 The Ash Fall Project Staff evaluates the work activities and documents the evaluation by completing the following steps:
    - A. Identify the work activity being evaluated by completing Part A of Attachment A, Evaluation for the Electronic Management of Information, Form 5-1.
    - B. Complete Part B1 of Attachment A.
    - C. If all answers given for the questions in Part B1 of Attachment A are “No” then proceed to 8.1.1.F to sign and date the form and submit the completed record in accordance with Section 9.0.
    - D. If one or more “Yes” answers are given for any of the questions in Part B1 of Attachment A, then complete Part B2.

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- E. If one or more “No” answers are given for any of the questions in Part B2, then document the results of the evaluation by completing Section C of Attachment A.
- F. Sign and date the form.
- G. Submit the completed record in accordance with Section 9.0.

## 8.2 Ensuring Accuracy and Completeness of Information

8.2.1 When evaluating the work activity, the Ash Fall Project Staff ensures the current process controls are appropriate to:

- A. Protect the information suitably from damage or destruction, and ensure that information is readily retrievable during its prescribed lifetime, using examples in Section 1 of Attachment B, Process Control Examples.
- B. Describe adequately how information will be stored with respect to backup medium, conditions, location, retention time, security, and access, using examples in Section 2 of Attachment B.
- C. Identify storage and transfer media properly as to source, physical and logical format, and relevant date (i.e., date written), using examples in Section 3 of Attachment B.
- D. Maintain the accuracy and completeness of the information placed into, or modified within, an electronic information management system, or placed onto, or modified on, electronic media, using examples in Section 4 of Attachment B.
- E. Ensure that data transfers are error free, or within defined permissible error rates, using examples in Section 5 of Attachment B. To ensure error free data transfers, the process function must be suitable to the type of information that is being transferred, guarantee that no information is lost in transfer, and guarantee that the input is recoverable from the output.
- F. Maintain security and integrity of information when placed into, or modified within and electronic information management system, or

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when placed onto, or modified on electronic media, using examples in Section 6 of Attachment B.

## 9.0 RECORDS MAINTENANCE

9.1 The forms and records generated through implementation of this procedure shall be prepared and submitted in accordance with AFP-AP-20, *Quality Assurance Records*.

9.2 The following are considered Lifetime QA Records:

- Evaluation for the Electronic Management of Information

## 10.0 FORMS USED

Form 5-1 – Evaluation for the Electronic Management of Information

## 11.0 ATTACHMENTS

Attachment A – Evaluation for the Electronic Management of Information  
Attachment B – Process Control Examples

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## Attachment A Evaluation for the Electronic Management of Information

<b>Ash Fall Project AFP-AP-05, Form 5-1</b>	<b>Evaluation for the Electronic Management of Information</b>	<b>Page of</b>	
<b>Part A - Work Activity Identification</b>			
Work Activity Identification (work plan number, technical product identification, etc.)			
<b>Part B1 – Work Activity Evaluation</b>			
		Yes	No
1. Will or does the work activity depend on a form of electronic media to store, maintain, retrieve, modify, update, or transmit information?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Will or does the work activity manage, control, or use an electronic database, spreadsheet, set of files, or other holding system for information?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Will or does the work activity transfer information electronically from one location to another (the method may be file transfer protocol, electronic download, tape to tape, disk to disk, etc.)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Part B2 – Work Activity Compliance Evaluation</b>			
	Yes	No	N/A
1. Does the work activity provide adequate controls to protect information from damage and destruction for its prescribed lifetime?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the work activity provide adequate controls to ensure that information is readily retrievable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the work activity provide adequate controls to describe how information will be stored with respect to media, conditions, location, retention time, security, and access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the work activity provide adequate controls to properly identify storage and transfer media as to source, physical and logical format, and relevant date?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Does the work activity provide adequate controls to ensure completeness and accuracy of the information input and any subsequent changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Does the work activity provide adequate access to controls to maintain the security and integrity of the information?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Does the work activity provide adequate controls to ensure that transfers (e.g., copying raw information from notebook to electronic information form, electronic media to another electronic media, etc.) are error free or within a defined permissible error rate?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Part C – Results of Evaluation</b>			
Provide a summary of the “as is condition,” proposed remedial actions, and expected completion data for each item in Part B2 that was indicated as “No.”			
Ash Fall Project Staff	Signature	Date	

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## **Attachment B – Process Control Examples**

### **Section 1 – Protecting Information from Damage or Destruction**

The following examples of process controls are provided for different systems and equipment:

#### **Servers**

- Access privileges are set to prevent unauthorized changes.
- Server is periodically backed up and the backups are appropriately labeled and stored.
- When putting files in a different directory or folder:
  - To retain current access privileges, files must be moved (e.g., dragged and dropped), not copied and pasted.
  - To assume the access privileges of the destination directory or folder, files must be copied and pasted, not moved (e.g., dragged and dropped).

#### **Workstations/Personal Computers**

- Access to information contained on personal computer is controlled (e.g., password protected and controlled physical access).
- Before changes are made, secured backup copies are created, appropriately labeled and stored, and kept until the changes are confirmed as correct.

#### **Instruments**

- Information is copied to a backup medium and the medium is appropriately labeled and stored.
- Any hard copy printouts generated are kept until the backup copy has been verified.

### **Section 2 – Describing How Information Will Be Stored**

- Access controls
- Environmental protection consideration such as humidity, heat, etc
- Location of storage (onsite, offsite)
- Media protection (how different types of media are to be stored)

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## **Section 3 – Identifying Electronic Media**

### **Physical Electronic Media**

- Medium type (tape, diskette, compact disk-read-only memory, etc.)
- Appropriately labeled with:
  - Date and time backup or copy was made
  - Source of backup (i.e., identify the computer system instrument, or other system that was the source of the information), discovery name, and file name
  - System utility used to perform backup
  - Format of the backup media
- Method of transport (mail, courier, etc.)
- Method of integrity verification upon receipt delivery (backup listing, file checksums, application/utility for verifications, etc.)
- Method for verifying/confirming delivery of storage or transfer medium

### **Non-Physical Electronic Media**

- Transport mechanism (e-mail, transmission control protocol/internet protocol, etc.)
- Utility and settings (file transfer protocol, copy, mail attachment, etc.)
- Method of receipt verification (visual inspection, transmission verification settings, checksums, application information integrity check, etc.)

## **Section 4 – Maintaining Information Accuracy and Completeness**

- A complete inspection of the information
- Random sampling of the information
- Checksums or cyclic redundancy checks
- Comparison of source hard copy to electronic input
- Other standards and methods, as appropriate

## **Section 5 – Ensuring Error-Free Data Transfers**

- Check sum
- File size
- Visual verification

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## **Section 6 – Ensuring Security and Integrity of Information Maintained**

- Maintain documentation for each person with write access to the electronic information management system or electronic media, including the name and signature of the person approving such access, and the date approved.
- Implement system level or internal application controls to give individual users the appropriate level of security access to the electronic information management system or electronic media.
- Perform periodic operational security checks of the electronic information management system or electronic media to detect any unauthorized entry and other breaches in the security system that could compromise the integrity of the information.

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**Form 12-1 – Record of Revision**

DOCUMENT: AFP-AP-05, *Control of the Electronic Management of Information*

Revision Number	Description of Changes	Revision on Pages	Effective Date
0	Initial issue	All	03/25/2016