

Activity: Software, Hardware and Database Controls

1.0 Purpose: This guideline provides quality surveillance guidelines for evaluating computer software, hardware and database controls.

2.0 Scope: Software, Hardware and Database Configuration Standards

E Installation

E Modification

E Usage

3.0 References:

3.1 Mair, William C.; Wood, Donald R.; Davis, Keagle W. Computer Control and Audit.
Altamonte Springs, FL: Institute of Internal Auditors, Inc., 1976 by Touche, Ross
and Company.

3.2 Perry, William. A Standard for Auditing Computer Applications. Boston, MA:
Auerbach Publishers Inc., 1987.

4.0 Guidelines:

4.1 In preparation for and during the conduct of this surveillance:

E Obtain and review implementing procedures, instructions and drawings governing
this activity.

E Prepare a guide or checklist using the selected items from this guideline.

- E Review past surveys, audits, surveillances and other evaluations/ assessments.
- E Ensure that checklists include, where applicable, actual observations of performance, general plant conditions, radiological work practices, housekeeping, work document controls and use, and safety practices.

NOTE: Refer to Guideline A.1, "General Quality Surveillance Guidance," for specific details on the attributes listed above.

4.2 Software, Hardware and Database Configuration Standards

- A. Select the general quality surveillance topic from the following, or related, general categories:
 - 1) Compatibility Requirements
 - 2) Documentation Requirements
 - 3) Nuclear Safety Review Requirements
 - 4) Performance Requirements
 - 5) Security Requirements
 - 6) Vendor Support Requirements
- B. Develop appropriate quality surveillance objectives based on the general categories listed above.
- C. Prepare for the quality surveillance by giving special consideration to the following:
 - 1. Timing: This type of surveillance normally would be performed during

regular business hours.

2. Contacts: Contact systems design engineers, computer operations engineers, and their supervisors.
 3. Observation methods: Compare actual configurations against drawings and standards. Observe design meetings.
- D. Observe operating activities and compare actual operating practices to approved procedures and good industry practice..
- E. Perform the quality surveillance in accordance with the appropriate plant-specific surveillance procedures.

4.3 Installation, Modification, and Usage

- A. Select the general quality surveillance topic form the following, or related, general categories:
1. Installation, modification, or operations controls.
 2. Installation, modification, or user training.
 3. Installation, modification, or user documentation.
- B. Develop appropriate quality surveillance objectives based on the general categories selected above.
- C. Prepare for the quality surveillance by giving special consideration to the following:
1. Timing: This type of quality surveillance would normally be performed whenever actual installation, modification, or operational work is being performed.

2. Contacts: Contact systems design engineers, computer operations engineers, installation personnel, maintenance personnel, or their supervisors.

3. Observation methods:

a. For installation , compare actual installation configuration against drawings and standards. Observe actual installation activities.

b. For modifications, compare actual modifications against drawings and standards. Observe modifications, design meetings, and modification work activities.

c. For operations, observe operating activities and compare actual operating practices to approved procedures and good industry practice.

D. Perform the quality surveillance in accordance with the appropriate plant-specific surveillance procedures.

5.0 Other Guidelines for Consideration:

5.1 A.1, "General Quality Surveillance Guidance"