PREPARATION AND CONTROL OF THE SHEARON HARRIS ENVIRONMENTAL QUALIFICATION MASTER LIST

NED DESIGN GUIDE - DG-VIII.34

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INDEX

I. APPLICABILITY

NED personnel, including NED managed contract personnel who are involved in the control of new design or modifications which affect safety-related equipment. The purpose of this design guide is to establish the instructions necessary for consistent development and control of the Environmental Qualification Master List (EQML).

II. GENERAL

A. The EQML will become a controlled document, maintained by NED, and stored in the computer equipment data base system (EDBS) which is maintained by HPOS.

B. Information Management Department (IMD) provides computer program control. The EQML will be compiled directly from the EDBS.

C. EDBS screen 408, Environmental Qualification Display, is used to designate the equipment qualification status of equipment where Y, H, J, K, M, or N designate equipment under the "Env" field on the 408 screen. (See paragraph II.D.7 for definition of designators.)

D. Definitions

1. EQML - The Shearon Harris Nuclear Power Plant EQML is a list of safety-related electrical equipment installed in a harsh environment, including interface materials such as splices, cables, heat shrink materials, and Regulatory Guide 1.97 instruments that require equipment qualification.

2. Harsh Environment - An area where the environmental conditions change significantly during or after any anticipated operational occurrence including LOCA or main steam line break. More specifically when:

   a. The temperature rises above ambient conditions by more than 10°C (18°F).

      AND/OR

   b. The total accumulated integrated radiation dose over a 40-year plus 1 year post accident period exceeds 1×10^4 rads. Equipment which contains sensitive semiconductors should be included to as low as 1×10^3 rads.

   These areas are shown for the plant in Section 3.11.B of the SHNPP FSAR.

3. Equipment Qualification Data Package (EQDP) - An assemblage of environmental qualification data received from a vendor or generated by CP&L to document environmental qualification. Documentation is to be completed in accordance with NED Design Guide DG-VIII.19.

4. Electrical Equipment - Electrical equipment which is physically independent and replaceable. Examples are instruments, motor operators, motors, limit switches, solenoid valves, and cables.

5. Class 1E - Class 1E electrical equipment is designated by instrument tag numbers containing an SA, SB, SAB, I, II, III, or IV in the tag number or designated as I&C Class Code N4 (by Regulatory Guide 1.97).

6. Safety-Related Items - Item tag numbers with an S before the train designation. This relates to valves, equipment, or speciality item (tank).

7. Equipment Qualification Designator

Y - Has electrical qualification requirements/not base lined.

N - Has no environmental qualification requirements.

H - Electrical equipment in a harsh environment/base lined.

M - Electrical equipment in a mild environment/base lined.

J - Has mechanical qualification requirements/not base lined.

K - Has mechanical qualification requirements/base lined.

III. PROCEDURE

	Responsibility		Action
A.	Principal Engineer	1.	Receives design change and assigns appropriate reviewers and cognizant engineers and provides appropriate guidance.
B.	Cognizant Engineer	1.	Reviews design change for effect on electrical equipment environmental qualification using flow chart (Attachment A).

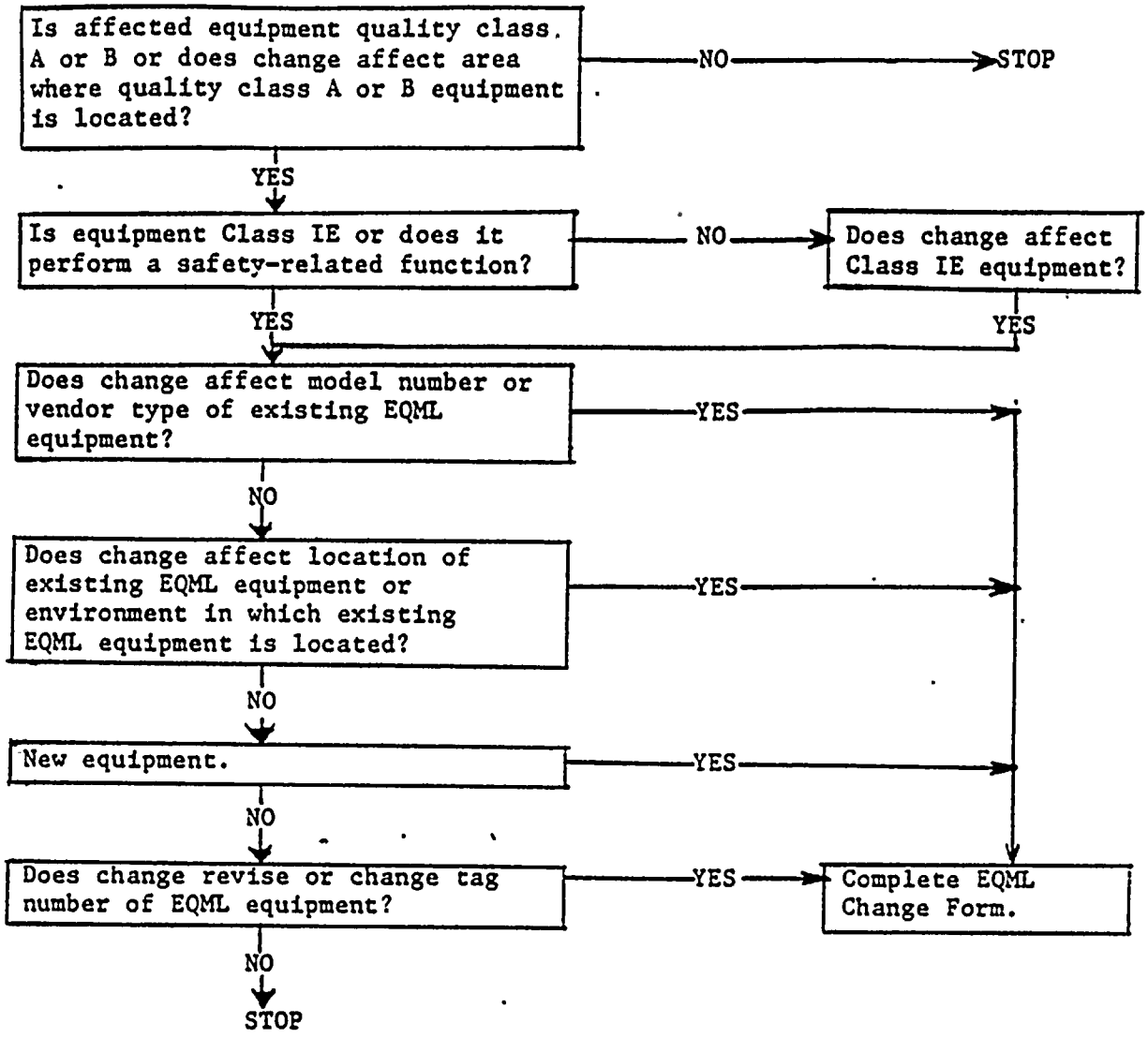
	Responsibility		Action
B.	Cognizant Engineer	2.	Obtains appropriate reviews by other groups if equipment type is outside the responsibility of the reviewing discipline.
		3.	Coordinates comments and comment resolution by other groups.
		4.	Completes EQML Change Form (Attachment B) if change affects EQ Master List.
		5.	Forwards entire package to Principal Engineer for concurrence.
C.	Principal Engineer or Designee	1.	Reviews and approves EQML Change Form (if applicable) and forwards to EQ Lead Engineer.
D.	EQ Lead Engineer	1.	Reviews completed EQML Change Form for compliance to NRC requirements/commitments.
		2.	Initiates EQML change, if appropriate, using change form information.
		3.	Initiates EQDP change, if appropriate, using NED Design Guide DG-VIII.19.
		4.	Forwards signed-off EQML Change Form to EQML Input Checker for technical review and sign off.
E.	EQML Input Checker	1.	Reviews EQML Change Form for technical adequacy and signs and dates form upon confirmation of adequacy.
		2.	Returns signed-off EQML change form to responsible group for design records and forwards a copy to the Harris EQ Coordinator for information.

	Responsibility	Action
F.	EQ Lead Engineer	1. Will issue a revised hard copy of the EQML to Document Control within one month after a revision is made.

IV. ATTACHMENTS

ATTACHMENT A

EQML FLOW CHART



ATTACHMENT B

EQML CHANGE FORM
ENVIRONMENTAL QUALIFICATION MASTER LIST CHANGE FORM

Equipment Tag No. Description

More _____

System Number Location

More _____

Description of Change

More _____

Recommendation

_____
Reviewer/Date

Resultant Action by EQ Lead Engineer

_____
EQ Lead Engineer/Date

Change Incorporated on
EQML Revision _____, EQDP Revision _____
Maintenance Requirements _____
Technical Manual _____

_____
EQML Input Checker/Date