480 V MCC cable Ampacity Measurement Program Description :

Background:

In order to ensure long term cable degradation does not occur the following periodic program of Class 1E cables from 480V MCC where motor nameplate current is greater than the de-rated cable ampacity. (approx. 120 motors). The current measurements could be as simple as a single phase clamp on current reading. The purpose of the program is two fold: (1) validate that unprotected cables are not being heat stressed due to over current. (2) Establish operating data that supports life-extension of the plant without cable replacement.

Implementation:

Step 1 Remove those cables with acceptable ampacity margin.

Of the 120 cables under evaluation SONGS expects to remove approx. 3/4 from field testing through analysis by showing that they a have an operating margin of greater then 70%. Thos is due to the fact that most SONGS cables are oversized due to length of cable runs to meet acceptable voltage drop requirements.

The analysis would de-rate all 120 cables by 70%, then compare the motor's name plate FLA to the cable's full de-rated ampacity. If the FLA is less then the full de-rated ampacity value the cable would not require a field current measurement. (note 70% is the maximum de-rating value required under E4C-65.)

Step 2 Evaluate those cables that failed step 1

Complete detailed analysis by determining actual de-rating value for cable still in program after applying the 70% de-rating filter. It is estimated that this detailed analysis will be required for 30 cables. If the motor's name plate FLA is less then the de-rated ampacity value the cable would not require field a current measurement.

Step 3 Field test :

Based on DEOs small sample program DEO estimates that approx. 15 cables will require single phase current measurements. When DEO can determine that current readings have already been taken within the last two years, those cables would not be retested but would be placed in the ongoing program for future periodic monitoring.

Step 4 Analysis:
Analysis of field data, recommend plant modifications, determine periodic testing interval.

Confidential
Withhold From Public Disclosure
Per 10 CFR 2.390(a)(6)

Schedule

Activity	RE		Completion date
1) Develop list of cables in Program Cable ID or Motor ID Acceptance Criteria	DEO	(b)(7)(C)	10/1/06
2) Develop work instructions MCC based?	MA	_____	11/1/06
3) Develop test schedule	ME	(b)(7)(C)	11/1/06
4) Complete first cycle testing	ME	(b)(7)(C)	2/1/07
5)Send results to DEO	ME	(b)(7)(C)	3/1/07