

April 27, 1990

Mr. William Brach
Chief, Vendor Inspection Branch
Division of Reactor Inspection and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: NRC Inspection of MCCB Adjustment Procedures
at Susquehanna Steam Electric Station -
NRC Docket No. 50-387/388
File No. RI-89-A-0072

Dear Mr. Brach:

Following discussions between NRC Staff, NUMARC Staff, and myself on behalf of The NEMA Molded Case Breaker Section on April 10, 1989, NRC Staff conducted an investigation of Susquehanna Steam Electric Station's procedures related to the inspection and recalibration of molded case circuit breakers. NRC Staff's findings, as a result of that investigation (Detailed in the subject NRC files) are that:

"the licensee does perform disassembly and adjustment of molded case circuit breakers. However, the licensee is performing this task under their Quality Assurance Program and in a controlled condition as required by applicable requirements. No safety deficiencies or violations were identified. This allegation has been closed."

NEMA's Molded Case Breaker Section takes strong exception to this finding. Rebuilding molded case circuit breakers beyond the point specified in manufacturer's literature is inherently unsafe.

Molded case circuit breakers have factory calibrated and sealed trip units. Since they are generally intended to be factory assembled and then not reopened, manufacturers have not issued specific repair kits, assembly drawings, or repair instructions for molded case circuit breakers. In those exceptional cases where UL listing permits the use of field installable components, the use of such components must be accomplished according to specific directions provided, by the manufacturer, with the components.

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In that regard, we suggest that Susquehanna's Program be reviewed as to:

1) What procedures and experience were used in establishing the adjustment procedures in the first place? To our knowledge, neither circuit breaker manufacturers nor any nationally known standards making body have published such procedures.

2) What assembly drawings were used to ensure proper reassembly?

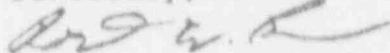
3) How was a determination made, for example, that it is proper to use a soldering gun or pencil to heat and unlock breaker internal adjustment screws? How was it determined that such heating will not have deleterious effects on the breaker. How was it determined that Lock-tite would not adversely affect the plastic housing?

4) How were Susquehanna's calibration procedure and equipment established?

As we have previously advised NRC, the Section's concern is not related to a question of utility personnel training. It is a question that there are no published instructions or retrofit kits for rebuilding circuit breakers. There is no non-destructive, completely comprehensive, test program to reverify all aspects of a molded case circuit breaker's performance after reassembly and/or recalibration, nor does the section believe that it would be possible to develop such a program. It is a question that field calibrations are not conducted in the same laboratory environments - to the same curves - as are original breaker calibrations. It involves the question that certain parameters can only be checked via destructive tests. Only destructive testing, for example, would establish that an interphase barrier had been inadvertently misplaced or omitted; or that important lubricants had been removed during the cleaning process.

We hope that the NRC will reconsider its finding at Susquehanna and determine that rebuilding and/or recalibrating molded case circuit breakers are not acceptable practices even when conducted under a utility's quality assurance program.

Sincerely,



Robert W. Baird
Division Operations Director

cc: Rebuilt Breakers T/F
Evan Cox
file:nrccalib.423 R

ALLEGATION MANAGEMENT SYSTEM

ALLEGATION NUMBER = RI-89-A-0072

RUN DATE: 890612

DOCKET/FACILITY/UNIT: 05000367 / SUSQUEHANNA 1 / 1
 DOCKET/FACILITY/UNIT: 05000368 / SUSQUEHANNA 2 / 2
 DOCKET/FACILITY/UNIT: / /
 DOCKET/FACILITY/UNIT: / /

ACTIVITY TYPES = REACTOR

MATERIAL LICENSES =

FUNCTIONAL AREAS = OPERATIONS

DESCRIPTION = ALLEGATION CONCERNING INAPPROPRIATE PROCEDURES USED BY PP&L AT
 SUSQUEHANNA REGARDING MCCB.

CONCERNS =
 1

SOURCE = NEMA

CONFIDENT = NO

RECEIVED = 890515 BY = U POTAPOVS / NRR

ACTION OFFICE CONTACT = AR BLOUGH = (FTS)346-5146

SAFETY SIGNIFICANCE = UNKNOWN BOARD NOTIFICATION =

STATUS = OPEN SCHED COMPLETION = 890715 DATE CLOSED =

ALLEGATION SUBSTANTIATED = ALLEGER NOTIFIED =

OI ACTION = OI REPORT NUMBER =

REMARKS = NRR RECD 5/15/89. TRF TO RI FOR RESOLUTION BY NRR OAC MEMO
 DATED 6/6/89.

SUPPORT OFFICE: RPS-39
 ACTION PENDING: CONVENE RI PANEL
 DOCUMENTATION:
 ALLEGER LAST CONTACTED: 890515 (RECEIPT)
 REFERENCE: NRP-89-A-0023
 KEYWORD: BREAKERS, PROCEDURES

ENTERED SYSTEM = 890612 CLOSED SYSTEM =

RECORD CHANGED = 890512