Duquesne Light Company
Beaver Valley Power Station
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April 6, 1993

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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
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Subject: Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
Request for Discretionary Enforcement

This letter provides our request for NRC discretionary enforcement regarding the requirements of Technical Specification Surveillance Requirement 4.3.1.1.1. Additional details supporting this request are located in the enclosure which has been prepared in accordance with the NRC's policy statement as documented in the Federal Register dated March 17, 1993 (58 FR 14308). This request has been reviewed by our Onsite Safety Committee (OSC) and is determined to be safe. Discretionary enforcement is requested for the period of time it takes to issue an emergency technical specification change in accordance with 10 CFR 50.91. We will submit an exigent change by April 16, 1993.

Questions regarding this submittal may be directed to G.S. Sovick at (412) 393-5211.

Sincerely,

Joyce S Thomas for
J. D. Sieber

Attachment

cc: Mr. L. W. Rossbach, Sr. Resident Inspector
Mr. T. T. Martin, NRC Region I Administrator
Mr. G. E. Edison, Project Manager
Mr. M. L. Bowling (VEPCO)

A001

Evaluation Supporting Discretionary Enforcement
Beaver Valley Power Station - Unit No. 2
Docket No. 50-412 License No. NPF-73

BACKGROUND

On April 5, 1993, the Beaver Valley Power Station Instrumentation and Control Section identified a potential testing inadequacy for the reactor trip breakers and reactor trip bypass breakers. This potential testing inadequacy was discovered as a result of an evaluation of NRC Information Notice 93-15, "Failure to Verify The Continuity of Shunt Trip Attachment Contacts In Manual Safety Injection and Reactor Trip Switches," which describes a similar surveillance testing inadequacy at another plant. Station management was apprised of the issue and directed that a thorough review of reactor trip breaker procedures be conducted expeditiously. It was determined that the 18 month surveillance testing program for the reactor trip breakers and reactor trip bypass breakers may not have adequately tested one aspect of the breaker trip circuitry. Therefore, it has been concluded that the trip breaker testing was not performed in compliance with all aspects of the Technical Specifications. Duquesne Light Company has evaluated the potential to perform the proper testing of the shunt trip circuit. Due to the complexity of the testing involved, we feel that it would be imprudent to conduct such a complex test procedure during power operation with its attendant trip potential.

Duquesne Light Company requests discretionary enforcement regarding the requirements of Technical Specification Surveillance Requirement 4.3.1.1.1, Table 4.3-1 Functional Unit 1, Manual Reactor Trip, Table Notation 10. As discussed above, Duquesne Light Company has not tested one specific aspect of the Manual Reactor Trip function during its 18 month surveillance testing program for the reactor trip breakers and reactor trip bypass breakers and, therefore, has not fully complied with the intent of Table Notation 10. In particular, the surveillance test for the Manual Reactor Trip function does not adequately test the direct shunt trip circuit continuity from the Main Control Board manual reactor trip switches to the shunt trip coil.

1. Safety Basis (evaluation of the safety significance and potential consequences of the proposed course of action):

   Independent verification of the manual shunt trip was performed during pre-operational and shunt trip installation testing. At least once per 18 months, opening of both reactor trip breakers has been initiated by use of one of the two manual reactor trip handswitches in the control room. This operation does not verify that both the shunt and undervoltage features function independently. However, it does verify that the trip breakers would be opened by at least one of the two diverse means required. Credit for the manual trip is taken only as a backup to the automatic reactor trip functions in Chapter 15 of the Beaver Valley Final Safety Analysis Report (FSAR). Alternate means of shutting down the reactor if the manual switches on main control board panels do not function, are listed in Emergency Operating Procedures FR-S.1. These include: local manual operation of the breakers supplying power to the rod drive motor generator sets, thus removing holding power to the control rods; local operation of the reactor trip breakers; manual rod insertion; and emergency boration. This situation, therefore, does not represent a significant safety concern in that the equipment that has been tested as well as the existing procedures assure that the plant will respond to transient conditions. This testing program inadequacy notwithstanding, we have determined that, based on extensive surveillance testing, and in the presence of the diverse trip features (undervoltage and shunt trip attachment), the reactor trip breakers and reactor trip bypass breakers are fully functional and capable of opening in response to a Main Control Board manual trip actuation.

2. Description of compensatory measures:

   Duquesne Light Company Operations Department supervision will discuss the surveillance discrepancy during the preshift briefing with each operating crew. Also, an on-shift required reading package will be provided to each licensed individual. The briefing and required reading will discuss the testing inadequacy and actions to take in the event that a manual reactor trip actuation is necessary and does not initiate the reactor trip. Beaver Valley Power Station conducts training on anticipated transient without scram (ATWS) events, including simulator training. Emergency operating procedures provide for the following actions in the event that the reactor trip breakers do not open when demanded:

   1. Manual inserting rod insertion,

   2. Initiation of an emergency boration, and

   3. Local opening of the reactor trip breakers and de-energization of the motor generator sets.

3. Justification for the duration of the request:

The duration of the requested waiver is until the fourth refueling outage, which is currently scheduled to begin on September 17, 1993. During the upcoming refueling outage, the applicable provisions of Technical Specification Surveillance Requirement 4.3.1.1.1 will be fully performed, including the Manual Reactor Trip Surveillance Test. Should Beaver Valley Power Station Unit 2 experience a planned or unplanned shutdown requiring an entry into MODE 3 prior to the refueling outage, the Manual Reactor Trip Surveillance Test will be completed.

This testing program inadequacy notwithstanding, Duquesne Light Company has determined that based on extensive surveillance testing, and in the presence of the diverse trip features (undervoltage and shunt trip attachment), the reactor trip breakers and reactor trip bypass breakers are fully functional and capable of opening in response to a Main Control Board manual trip actuation or manual safety injection actuation.

4. Basis for the conclusion that the request does not have a potential adverse impact on the public health and safety:

Duquesne Light has determined that there is no significant safety impact associated with this request for discretionary enforcement associated with the requirements of Technical Specification Surveillance Requirement 4.3.1.1.1, Table 4.3-1, Functional Unit 1, Manual Reactor Trip. Although the surveillance test did not adequately test one aspect of the manual reactor trip function, there is no reason to believe that any element of the manual trip function is not functional. Duquesne Light believes that based on the surveillance testing performed, the manual reactor trip function is fully functional and capable of performing its design function if called upon to do so.

The reactor trip system possesses several diverse and independent features which enable it to shutdown the reactor on demand. The operation of any of these features demonstrates that the reactor protection system is capable of performing its safety function. Therefore, given that surveillance tests performed on the reactor trip system did not adequately test one aspect of the system, the reactor protection system still possesses sufficient diverse and independent features to enable it to perform its design function.

The surveillance testing performed on the reactor trip breakers and the reactor trip bypass breakers was inadequate in that the capability of the manual reactor trip switches, located on the main control board, to directly actuate the shunt trip coil was not positively verified. However, the procedure does verify the capability of the manual reactor trip switches to trip the reactor via actuation of the undervoltage relay. The procedure verifies the operation of the shunt trip coil, however, it does not differentiate actuation from the benchboard switch contacts versus the undervoltage interfacing relay. (See Figure 1 attached.)

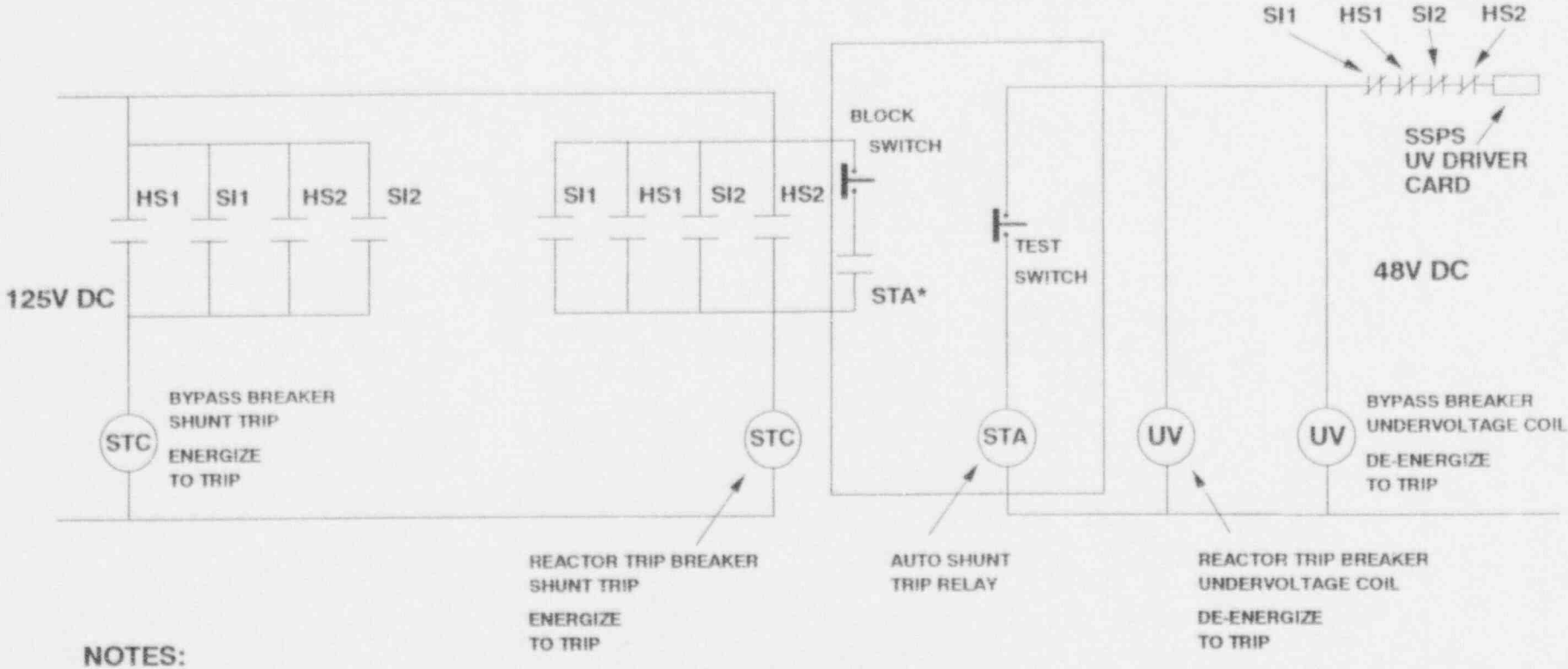
The ability of the reactor Solid State Protection System (SSPS) to initiate a reactor trip via the undervoltage coil and indirectly energize the shunt trip coil has been verified. Should a reactor trip be required, this is the portion of the reactor trip system which would likely function to open the reactor trip breakers. It is unlikely that a manual reactor trip would be required. In the unlikely event that the operator was required to initiate a manual reactor trip and the signal did not reach the shunt trip coil, the de-energization of the undervoltage relay would cause the reactor trip breakers to open. Additionally, when the undervoltage relay is de-energized, the auto shunt trip relay (STA) also de-energized. This action closes a contact which will energize the shunt trip coil and open the reactor trip breakers.

Therefore, the reactor trip system will continue to function as designed with no adverse impact as a result of the delay in performing the operations surveillance test on the reactor trip breakers. Since the response of the plant is unchanged, there is no significant safety impact resulting from the delay in performing the surveillance testing.

5. Basis for the conclusion that the request does not involve adverse consequences to the environment:

The requested discretionary enforcement involves no adverse environmental consequences. The reactor trip breakers and reactor trip bypass breakers are fully functional and capable of opening the breakers in response to a Main Control Board manual trip actuation. Therefore, the testing inadequacy does not impact accident analyses or the associated radiological consequences nor does it impact systems associated with the control of radiological or non-radiological effluents.

BEAVER VALLEY POWER STATION
UNIT 2
AUTO/MANUAL REACTOR TRIP CIRCUIT



NOTES:

BENCH BOARD SECTION A REACTOR TRIP SWITCH OPERATES HS1 CONTACTS. ALL SI1 CONTACTS OPERATE SIMULTANEOUSLY

BENCH BOARD SECTION B REACTOR TRIP SWITCH OPERATES HS2 CONTACTS. ALL SI2 CONTACTS OPERATE SIMULTANEOUSLY

BENCH BOARD SECTION A1 SAFETY INJECTION SWITCH OPERATES SI1 CONTACTS. ALL HS1 CONTACTS OPERATE SIMULTANEOUSLY

BENCH BOARD SECTION A2 SAFETY INJECTION SWITCH OPERATES SI2 CONTACTS. ALL HS2 CONTACTS OPERATE SIMULTANEOUSLY

* CONTACT 'STA' CLOSES WHEN RELAY 'STA' DE-ENERGIZES

FIGURE 1