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NORTHEAST NUCLEAR ENERGY COMPANY

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August 9, 1991

Docket No. 50-336
A09556

Mr. Charles W. Hehl, Director
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, Pennsylvania 19406

Dear Mr. Hehl:

Millstone Nuclear Power Station, Unit No. 2
RI-91-A-0037

We have completed our review of Issues 1 and 3 concerning activities at Millstone Station. A request for an extension for Issue 2 is addressed below. As requested in your transmittal letter, our response does not contain any personal privacy, proprietary, or safeguards information. The material contained in this response may be released to the public and placed in the NRC Public Document Room at your discretion. The NRC letter and our response have received controlled and limited distribution on a "need to know" basis during the preparation of this response.

ISSUE 1:

During review of MP 2720R8, it was noted that there may have been inadequate instructions on the proper use of a torque wrench and crows foot to establish the proper torque on valves having Namco Seal/Connectors. Specifically the procedure did not, but needed to indicate that unless the crows foot is used at a 90 degree angle to the torque wrench, corrections have to be made and overtorquing may occur.

Please discuss the validity of the above assertions. Please discuss the actions that you may take to determine if the affected Namco Seal/Connectors have been overtorqued. Please evaluate and discuss the need to make changes to maintenance procedures to clarify the instructions on the use of torque wrenches and adapters.

Response:

Northeast Nuclear Energy Company (NNECO) reviewed Maintenance Procedure MP 2720R8 - Namco Seal/Connector Assembly Installation, the manufacturer's installation manual and the AWOs that installed the Namco Connectors. The procedure and the installation manual both specified a torque range of 45 to 55 ft-lbs for installing the Namco Connector receptacle to the Namco limit switch housing. All the AWO Inspection Plans specified a torque range of 45 to 50 ft-lbs for the receptacle installation, which was verified by a QSD inspector.

The AWO also identified the torque wrench that was used during the installation. From dimensions taken from the torque wrench and crows foot (from the Namco Connector Installation Tool Kit) a calculation was performed to determine the maximum amount of overtorquing that could have occurred. Assuming the maximum torque specified on the Inspection Plan was the actual setting on the torque wrench, then the maximum torque that would have been applied to the receptacle/limit switch housing would have been 58 ft-lbs.

Namco was contacted to determine the effect of overtorquing the connector receptacle/limit switch housing by 3 ft-lbs. Namco indicated that the upper torque limit was specified to protect the limit switch housing. Namco also stated that their Qualification Test Reports contain a caution stating that applied torque is not to exceed 85 ft-lbs. According to Namco's Engineering, 85 ft-lbs is the maximum torque that can be applied that will not cause deformation or cracking of the limit switch housing.

The Job Supervisor responsible for installation of the Namco Connectors was interviewed. He was knowledgeable in the use of torque wrenches with crows foot adapters and their effect on the actual torque versus the indicated torque. The Job Supervisor produced a sheet of information on computing torque when using an adapter or extension and indicated that this was used during connector installation to establish the torque wrench setting. The Job Supervisor stated that the torque on the Inspection Plan was the actual torque applied to the receptacle/limit switch housing.

Based on the above, there is reasonable assurance that the connector receptacle/limit switch housing was not overtorqued during installation of the connectors. If overtorquing did occur, it would have exceeded the upper limit by only 3 ft-lbs (58 ft-lbs), which is well below the maximum torque that could cause damage to the limit switch housing (>85 ft-lbs). In general, torque settings are sufficiently conservative such that overtorquing should not occur.

NNECO does not believe that a procedure change is required or appropriate. Millstone Unit No. 2 Maintenance procedures provide instruction on how to perform various maintenance tasks and provide guidance on what tools may be required, but the procedures do not provide instructions on how to use tools. The premise that Millstone Unit No. 2 Maintenance personnel are able to properly use the tools of their trade is a basic assumption made in the preparation of Maintenance procedures.

ISSUE 2:

Changes were made to PORC approved Maintenance Form 2720A3-1, Cathodic Protection Data Sheet without going to PORC for change approval. The approved data sheet was changed to allow recording of data in blocks for OG 1, OG 2, OG 3, and OG 4 that were lined through and not to be used.

Please discuss the validity of the above assertions. If any discrepancies are found, please discuss corrective actions taken including any generic procedural compliance issues.

Response:

We are still investigating this matter and will respond when the investigation is complete. We request an additional two-week extension (to August 24, 1991) to respond.

ISSUE 3:

Certain safety-related Motor Operated Valves had their torque switches improperly balanced during the past outage due to defective torque switch balancing equipment. Specifically the valves affected are of the SMB-00 type, 2CH508, 2CH509 and 2CH514. The problem may also extend to SMB-000 type valves, 2MS65, 2MS201, SV4188, 2RC403, 2RC405 and 2RB301B. The SMB-00 and SMB-000 defective test equipment has been returned to the manufacturer.

Please discuss the validity of the above assertions. Please state why the subject valves are considered to be operable. If any of the subject valves are not considered to be operable, please discuss corrective actions that have been taken. Please discuss measures that have been taken to ensure that defective equipment is identified prior to use.

Response:

While developing procedures for the Millstone Unit No. 3 torque switch tester, discrepancies were found between the Millstone Unit No. 2 and the Millstone Unit No 3 torque switch testers for Limitorque SMB-00 actuators. The torque switch testers and the switches set with these testers, were evaluated by NUSCO and Babcock & Wilcox (B&W) Engineering. Based on this evaluation, three valves required further evaluation; these were 2CH508, 2CH509 and 2CH514. NUSCO Mechanical Engineering performed calculations which showed the above MOVs met the design requirements for torque switch settings in both the open and closed directions. Therefore, the MOVs that had the torque switches set by the B&W torque switch testers are considered to be operable.

The torque switch testers were purchased from B&W. Upon receipt, the units were inspected for physical damage, proper operation of moving parts and operation of the dial indicators, including calibration. The dial indicators were determined to be marginal and they were replaced. The replacement dial indicators were subsequently verified to be acceptable as installed.

The torque testers are sold as non safety-related products that are provided under B&W Nuclear Engineering and Plant Services Division Quality Assurance Plan for non safety-related products and services. Northeast Utilities is currently working with B&W to develop an action plan to ensure that the problem does not recur. We were aware of this problem and had begun development of this action plan prior to receipt of this concern from the NRC.

After our review and evaluation, we find that these issues did not present any indication of a compromise of nuclear safety. We appreciate the opportunity to respond and explain the basis of our actions. Please contact my staff if there are any further questions on any of these matters.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

E. J. Mroczka
Senior Vice President

cc: W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3
E. C. Wenzinger, Chief, Projects Branch No. 4, Division of Reactor Projects
E. M. Kelly, Chief, Reactor Projects Section 4A