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POWERING

MICHIGAN'S PROGRESS

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

February 19, 1991

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Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -
RESPONSE TO INSPECTION REPORT 50-255-88026; QA PROGRAM APPLICABILITY TO DIESEL
GENERATOR FUEL OIL

Nuclear Regulatory Commission (NRC) Inspection Report 50-255-88026, dated December 23, 1988 documented the results of a routine unannounced inspection by the resident inspectors. Included in the inspection was a Safety Issues Management System (SIMS) item, MPA-A-15, diesel generator fuel oil. No violations or deviations resulted from the inspection, however, a weakness was identified in the Plant's control of the quality of diesel fuel oil. The purpose of this letter is to address the issue of QA program applicability to diesel fuel oil raised by the inspectors.

Gerald B Slade
General Manager

CC Administrator Region III, USNRC
NRC Resident Inspector, Palisades

Attachment

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ATTACHMENT

Consumers Power Company
Palisades Plant
Docket 50-255

QA PROGRAM APPLICABILITY TO DIESEL FUEL OIL

February 19, 1991

2 Pages

BACKGROUND

The NRC issued a letter entitled "Quality Assurance Requirements Regarding Diesel Generator Fuel Oil", dated January 7, 1980. In part the letter stated that:

"Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" to 10 CFR Part 50 establishes overall quality assurance requirements for design, construction, and operation of structures, systems and components important to safety. Consumable items where quality is necessary for functional performance of safety related components shall also be classified as safety related and thus subject to applicable provisions of Appendix B to 10 CFR Part 50. Regulatory Guide 1.137, "Fuel Oil Systems for Standby Diesel Generators" describes a method acceptable to the NRC staff for complying with the Commission's regulations regarding fuel oil systems for standby diesel generators and the assurance of adequate fuel oil quality."

"You are requested to review your Quality Assurance Program with regard to diesel fuel oil. If you do not include diesel generator fuel oil in your Quality Assurance Program we request you include it within 90 days of receipt of this letter. However, if you take exception to this position and do not comply, we request a response within 90 days of receipt of this letter which provides justification for you not complying with our position."

On April 21, 1980 Consumers Power Company (CPC) responded stating that diesel fuel oil is included in the Palisades Plant QA Program, Section 5.2.2, dated February 15, 1980. This particular paragraph addressed consumables in regards to their inclusion on the plant quality list.

In January 1982, Section 5.2.2 of the Palisades QA Program was deleted with the reasoning that the Q-List does not include consumables. The basis for this position was that the nuclear industry was finding it difficult to impose "quality" requirements on vendors who supplied the identical item to those outside the nuclear industry. As this situation developed over the next few years CPCo implemented a number of quality requirements that were either imposed on the vendors at the time an order was placed or were verified by the receipt inspection process. (These quality requirements were typically satisfied with a certificate of compliance supplied by the vendor.) Diesel fuel oil was included in this latter category wherein CPCo imposed acceptance criteria on certain physical characteristics of the diesel fuel oil prior to accepting delivery. This constituted our QA program for diesel fuel oil. However, because of the deletion from the Q-List, diesel generator fuel oil was no longer included in the formal QA program and an exception has not been taken with the NRC's January 7, 1980 letter.

Corrective Actions Taken

Based on the results of the inspection by the NRC Resident Inspectors, Palisades Plant reviewed Regulatory Guide 1.137 and developed a position that complies with the requirements stated in Regulatory Guide 1.137. Technical Specifications Surveillance Procedure (TSSP) MC-17, "Fuel Oil Sampling", currently requires that the Diesel Oil Storage Tank, T-10, be sampled and the sample analyzed once per month for water and sediment and kinematic viscosity. The sample is also analyzed for specific gravity, for information purposes only. (The manufacturer of the Palisades diesel engines, ALCO, does not stipulate an acceptance criteria for specific or API gravity.) We believe that the Palisades Plant position is consistent with the Staff's position based on the July 5, 1983 letter entitled "Clarification of Surveillance Requirements for Diesel Fuel

Impurity Level Tests (Generic Letter No. 83-26)". In that letter guidance was provided that stated that the specific gravity or the API gravity should be consistent with that specified by the manufacturer. Since, in our case, no acceptance criteria for the specific gravity test is provided by the manufacturer, no acceptance criteria for this test is imposed on the fuel oil by the Palisades Plant. In addition, we sample each diesel fuel truck delivery prior to the fuel oil being emptied into the Diesel Oil Storage Tank. This activity is controlled by chemistry procedure CH 3.33, "Bulk Fuel Oil Tank Sampling." This sample is analyzed for water and sediment, viscosity and specific gravity. The fuel oil must meet the limits of ASTM D975-81 for water and sediment and viscosity before the fuel oil is emptied into the Diesel Oil Storage Tank.

Furthermore, on a semi-annual basis, the Diesel Oil Storage Tank (T-10) is sampled and analyzed for all the parameters listed in ASTM D975-81 and Regulatory Guide 1.137. This is currently controlled using the Palisades Periodic and Predetermined Activity Control (PPAC) program and is performed under PPAC X-CHEM 0226, "T-10 Sampling". Since the turnover rate in the Diesel Oil Storage Tank (T-10) at the Palisades Plant is very high, the diesel fuel oil quality degradation problems experienced at other plants such as biofouling and cetane number reduction, have not been experienced at Palisades. This high turnover rate is attributable to the multiple uses of the diesel fuel oil supplying equipment such as the diesel driven firepumps and the plant heating boilers.

It is believed that the actions outlined above are sufficient to meet the requirements stipulated in NRC's letter dated January 7, 1980. Palisades will perform the tests required by Regulatory Guide 1.137 with the understanding that the NRC staff finds this method acceptable. It is noted that exceptions are taken with respect to specific gravity analysis and the periodicity for analyzing for all the parameters specified in Table 1 of ASTM D975-81 however, we believe our current program adequately addresses these issues. It is also noted that that our current program is consistent with the most recent revision of the Standard Technical Specifications for Combustion Engineering Plants issued by the NRC in January 1991.

The commitment to perform the diesel fuel oil testing, as described in Regulatory Guide 1.137, will be tracked in the Palisades Plant commitment tracking system as requiring NRC approval prior to reducing the testing requirements in the plant procedures. In addition, Technical Specification Surveillance Procedure MC-17, "Fuel Oil Sampling", will be revised to include the analysis for specific gravity.