

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of)	
)	
GENERAL PUBLIC UTILITIES NUCLEAR)	
CORPORATION, ET AL.)	Docket No. 50-289
)	
(Three Mile Island Nuclear)	
Station, Unit No. 1))	

EXEMPTION

I.

General Public Utilities Nuclear (GPUN) Corporation (the licensee) and three co-owners hold Facility Operating License No. DPR-50, which authorizes operation of the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1) (the facility) at power levels not in excess of 2535 megawatts thermal. This license provides, among other things, that the facility is subject to all rules, regulations, and Orders of the Nuclear Regulatory Commission (the Commission) now or hereafter in effect.

The facility is a pressurized water reactor located at the licensee's site in Dauphin County, Pennsylvania.

II.

Appendix J of 10 CFR Part 50, Section III.D.3, requires that Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than two years. Section II.H of 10 CFR Part 50, Appendix J, defines "Type C Tests" as tests intended to measure containment isolation valve leakage rates. These valves help maintain containment integrity at design basis accident conditions.

III.

By letter dated October 22, 1985, the licensee requested an exemption from the schedular requirements of 10 CFR Part 50, Appendix J, Section III.D.3. Specifically, 71 valves are due for Type C testing beginning February 23, 1986. The licensee proposes to postpone leak testing of these valves until the next scheduled steam generator inspection outage; or if the planned outage does not occur as expected, the licensee will shut down TMI-1 on August 23, 1986, specifically to test these valves. In order to test these 71 valves, the plant must be in a cold shutdown condition.

TMI-1 had been in a cold shutdown condition since March 28, 1979. On May 29, 1985, the Commission's shutdown Order was lifted and a plant heatup was conducted on June 7, 1985. The plant remained in a hot shutdown condition pending judicial review of the Commission's Order. On October 2, 1985, the Supreme Court lifted the judicial stays in effect on the Commission's restart Order, and the plant was taken critical on October 3, 1985. The plant then entered a planned power ascension test program which was completed January 2, 1986. TMI-1 will operate at full power until approximately March 22, 1986. At that time, license condition 2.c.(8)4 requires a plant shutdown to conduct an eddy-current examination of the steam generators. If the licensee had been allowed to start up upon issuance of the original Commission Order, the steam generator inspection outage would have occurred before February 23, 1986. The judicial stay on the Commission's Order could have been lifted at any time, so the licensee remained in hot shutdown. The stay was finally lifted on October 2, 1985, and the plant taken critical. However, starting the power ascension

program in October 1985 left insufficient time to complete the program, operate at full power for the specified number of days, and still shut down before February 23, 1986.

The duration of the judicial stay was beyond the control of the licensee. Instead of going to cold shutdown conditions during this, at that time, undefined period, the licensee made a deliberate choice to remain in a hot condition for operator training. As a result of this decision, as noted in the staff's startup inspection reports, the operators gained valuable experience which proved to be beneficial when the plant was allowed to operate.

The licensee has leak tested all accessible valves. However, there are 71 valves which require the plant to be in a cold shutdown condition before testing can be accomplished. To require the plant to shut down solely to leak test these valves by February 23, 1986, would cause a non-desired perturbation on the steam generator test program and an unnecessary thermal transient on the plant.

Since the shutdown of March 28, 1979, four series of local leak rate tests have been conducted at TMI-1. This frequency of tests is more than what would ordinarily be required over a less than 7-year span. Moreover, leakage paths were identified during the tests and necessary repairs were satisfactorily performed. The latest local leak rate tests conducted in 1984 showed that the actual leakage was less than one third of the allowable limit which indicates that the valves were in good condition. Based on these test results, the valves are predicted to remain within acceptable leakage limits throughout the time interval extension requested.

Containment test requirements per Appendix J of 10 CFR 50 provide for pre-operational tests and periodic verification by tests of the leak-tight integrity of the primary reactor containment and systems and components which penetrate containment. The purposes of the tests are to assure that (a) leakage through the primary reactor containment and systems and components penetrating primary containment shall not exceed allowable leakage rate values as specified in the technical specifications or associated bases and (b) periodic surveillance of reactor containment penetrations and isolation valves is performed so that proper maintenance and repairs are made during the service life of the containment and systems and components penetrating primary containment. The regulations specify a maximum of a 2-year interval between Type C tests to define a general periodicity to satisfy the above objectives. Circumstances factored into the 2-year interval include the assumption that a normal plant will be fully operational and hot for most of the time interval.

The licensee will meet the schedular requirement for all but a maximum of 71 valves. However, for these 71 valves, the four series of local leak rate tests conducted during the 6 $\frac{1}{2}$ -year shutdown, with the accompanying valve surveillance and maintenance as documented in the tests, provide sufficient evidence to conclude that with the few months' delay in testing, (a) leakage through the valves will not exceed allowable values before the next test and (b) sufficient maintenance and repairs have been made over the service life of the valves to insure their integrity until the next test. Thus, we conclude that the underlying purpose of the rule, i.e., to require local leak rate testing at periodic intervals of certain types of containment isolation

valves to determine whether there has been degradation in the leakage characteristics of these valves which might adversely affect containment integrity, will be satisfied even with the delay in testing.

Based on the above discussion, the licensee's proposed extension for the Type C testing of 71 valves listed in their October 22, 1985, submittal until startup from the steam generator inspection outage scheduled to begin in late March 1986 is acceptable. This is a one-time only schedular exemption from the requirements of 10 CFR 50, Appendix J, Section III.D.3.

IV.

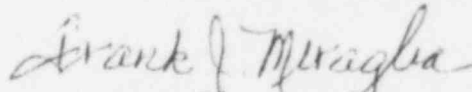
Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present justifying the exemption, namely that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule - to require local leak rate testing at periodic intervals of certain types of containment isolation valves to determine whether there has been degradation in the leakage characteristics of these valves which might adversely affect containment integrity. Specifically, as noted above, the number of leak tests which have been conducted by the licensee during the shutdown, and the latest local leak rate test results which showed actual leakage less than one-third of the allowable limit, leads the staff to conclude that requiring the plant to shut down solely to test the remaining valves by February 23, 1986 (rather

than late March 1986 as requested by licensee) is not necessary to assure the continuing maintenance of containment integrity. Accordingly, the Commission hereby grants an exemption as described in Section III above from Section III.D.3 of Appendix J to the extent that the 2-year interval for performing Type C tests on 71 valves may be extended, on a one-time basis only, for TMI-1 until the startup from the steam generator inspection outage scheduled to begin in late March 1986.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this Exemption will have no significant impact on the environment (February 4, 1986, 51 FR 4447).

This Exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Frank J. Miraglia, Director
Division of PWR Licensing-B

Dated at Bethesda, Maryland
this 20th day of February 1986