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SUBJECT: Responds to NRC Bulletin 93-002, "Debris Plugging in ECC Suction Strainers." Investigation identified no fibrous air filters or other temporary sources of fibrous matl, not designed to withstand LOCA, currently installed at plant.

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TITLE: Bulletin Response (50 DKT)

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NIAGARA MOHAWK POWER CORPORATION/301 PLAINFIELD ROAD, SYRACUSE, N.Y. 13212/TELEPHONE (315) 474-1511

June 10, 1993
NMP2L 1392

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Re: Nine Mile Point Unit 2
Docket No.50-410
NPF-69

Gentlemen:

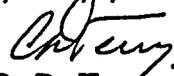
Subject: NRC Bulletin No. 93-02, Debris Plugging of Emergency Core Cooling Suction Strainers

On May 11, 1993, the Commission issued NRC Bulletin No. 93-02, Debris Plugging of Emergency Core Cooling Suction Strainers, to notify licensees of a contributor to the potential loss of net positive suction head margin for Emergency Core Cooling Systems. Specifically, Bulletin No. 93-02 discussed the concern that Loss-of-Coolant-Accident generated debris (fibrous material) could enter the suppression pool and block Emergency Core Cooling System suction strainers.

Accordingly, the Commission requested that licensees identify fibrous air filters or other temporary sources of fibrous material, not designed to withstand a Loss-of-Coolant-Accident, which are installed or stored in primary containment. Licensees were requested to take any immediate compensatory measures which may be required to assure the functional capability of the Emergency Core Cooling System. The Commission also requested that licensees submit a written report within 30 days stating actions that have been taken or that will be taken to address the identified concerns.

Niagara Mohawk has investigated the use of fibrous material in the Nine Mile Point Unit 2 drywell. The investigation has identified no fibrous air filters or other temporary sources of fibrous material, not designed to withstand a Loss-of-Coolant-Accident, currently installed in the Nine Mile Point Unit 2 drywell. The enclosure to this letter provides the basis for this determination.

Very truly yours,


C. D. Terry
Vice President
Nuclear Engineering

JMT/mls

xc: Mr. T. T. Martin, Regional Administrator, Region I
Mr. R. A. Capra, Director, Project Directorate I-1, NRR
Mr. J. E. Menning, Project Manager, NRR
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JEM



UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of)
Niagara Mohawk Power Corporation) Docket No.50-410
Nine Mile Point Nuclear Station Unit No. 2)

C. D. Terry, being duly sworn, states that he is Vice President - Nuclear Engineering of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the document attached hereto; and that the document is true and correct to the best of his knowledge, information and belief.



C. D. Terry
Vice President
Nuclear Engineering

Subscribed and sworn before me,
in and for the State of New York
and the County of Orangetown,
this 10th day of June, 1993

My Commission expires:
6/18/94 Kathleen Ciccarino

KATHLENA R. CICCARINO
Notary Public in the State of New York
Qualified in Onondaga County No. 4966257
My Commission Expires June 18, 1994



NRC Bulletin No. 93-02 was issued following an event that occurred at the Perry Nuclear Station, a Boiling Water Reactor 6 with a Mark III Containment. A routine outage practice at Perry was to install filters in the drywell and containment cooling systems for the purpose of maintaining cleanliness in the drywell/containment. These temporary filters were replaced each outage and left there during normal operation. Fibers from these filters eventually entered the suppression pool resulting in clogged Emergency Core Cooling System suction strainers.

Unlike Perry, fibrous filters and other sources of fibrous materials are not routinely brought into the Nine Mile Point Unit 2 drywell to support refueling activities. Additional ventilation is typically supplied by large High Efficiency Particulate Air (HEPA) ventilation units which are physically placed outside the drywell, with temporary ducting running into the drywell. The HEPA filters physical location precludes fibrous filter material from being introduced into the drywell. If additional ventilation is required, small, portable HEPA ventilation units are brought into the drywell but removed prior to startup. Accountability for these units is maintained through a site radiation protection procedure. The use of fibrous insulation on a temporary basis is minimal. If fibrous material (filters, insulation, etc.) were to be used, even on a temporary basis, its use would need to be reviewed in accordance with the temporary modification or other plant change procedure. This would include evaluating the potential impact of the fibrous material on plant operation. Currently, no temporary modifications exist on drywell cooling or ventilation systems.

The Nine Mile Point Unit 2 drywell unit coolers were originally furnished with prefilters. These prefilters have since been removed and, therefore, do not constitute a potential source of fibrous material.

Cleanliness of the pool is a key contributor to the potential for strainer blocking. Because of the Mark III containment design (Perry), maintenance activities can take place over the suppression pool. With a Mark II containment (Nine Mile Point Unit 2) the pool is enclosed and less susceptible to foreign material intrusion. Therefore, the possibility of intrusion of foreign matter into a Mark III containment pool is greater than for a Mark II pool.

The drywell is thoroughly inspected for cleanliness (housekeeping) during walkdowns by plant operators prior to plant start-up following each refueling outage. This inspection is intended, in part, to identify any poor housekeeping practices or abnormal drywell configurations. Since non-essential materials are not normally stored in the drywell, the storage of filters or other sources of fibrous material in the drywell would be identified and removed. Also, the walkdowns would potentially identify any fibrous material that was installed on a temporary basis (i.e., an abnormal system configuration).



In the unlikely event that insulation material did reach the drywell floor as suspended debris, it would tend to accumulate outside the downcomer pipes that protrude 3 to 6 inches above the sloping drywell floor. Any suspended debris overflowing into the downcomer pipes would enter the suppression pool at an elevation of 190 feet with an initial downward velocity. The suction strainers are located below this elevation; however, they are located closer to the pool wall than the outermost downcomer pipes. Additionally, the suction strainers are designed for a maximum flow velocity through the perforations of 1ft/sec with the strainers 50 percent plugged. Therefore, the fluid velocity approaching the strainers is less than 1ft/sec and the potential for any insulation to migrate toward the strainers is small.

In conclusion, the need and therefore use of fibrous material in the Nine Mile Point Unit 2 drywell on a temporary basis is minimal. If fibrous material were to be used (such as the use of filters at Perry) the potential impact of its use would be evaluated in accordance with plant change procedures. This would include the effect of fibrous material on plant operations during a Loss-of-Coolant-Accident. The walkdowns performed prior to start-up from the Nine Mile Point Unit 2's last refueling outage would have identified the storage of any fibrous material and identified any material inadvertently left behind due to outage work. Based on the above discussion, no fibrous air filters or other temporary sources of fibrous materials, not designed to withstand a Loss-of-Coolant-Accident, are installed or stored in the Nine Mile Point Unit 2 drywell. Therefore, no specific actions are required. Also, the Nine Mile Point Unit 2 Mark II Containment design is less susceptible than the Mark III (Perry) design to the introduction of fibrous material into the suppression pool. Therefore, design features and controls are in place to preclude an event similar to the one at Perry at Nine Mile Point Unit 2.



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