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SUBJECT: PNO-IV-98-012A:update to 980311 occurrence of reactor scram as result of inadvertent closure of one of main steam isolation valves.RegionIV special insp team is completing charter w/preliminary observations & findings.

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March 16, 1998

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE
PNO-IV-98-012A

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by Region IV staff in Arlington, Texas on this date.

<u>Facility</u>	<u>Licensee Emergency Classification</u>
Washington Public Power Supply System	Notification of Unusual Event
Washington Nuclear 2	Alert
Richland, Washington	Site Area Emergency
Dockets: 50-397	General Emergency
	X Not Applicable

Subject: UPDATE TO UNPLANNED REACTOR SCRAM AND ENGINEERED SAFETY FEATURE

This preliminary notification updates information discussed in PNO-IV-98-012. On March 11, at 5:16 a.m. (PST), WNP-2 experienced a reactor scram as a result of an inadvertent closure of one of the main steam isolation valves (MSIVs). The unexpected closure of the inboard MSIV on Steam Line D resulted in a high steam flow isolation signal on the other three steam lines. The closure of the MSIV caused a pressure and power increase, the latter of which led to a reactor protection signal to trip the reactor. As expected, the main generator tripped. The plant transient also caused an actuation of some engineered safety features (ESF) and emergency core cooling systems (ECCS), including the plant emergency diesel generators, High Pressure Core Spray (HPCS), and Reactor Core Isolation Cooling (RCIC) systems. Refer to PNO-IV-98-012 for additional information.

The Region IV special inspection team, which was dispatched to follow this event, is completing its charter, with the following preliminary observations and findings.

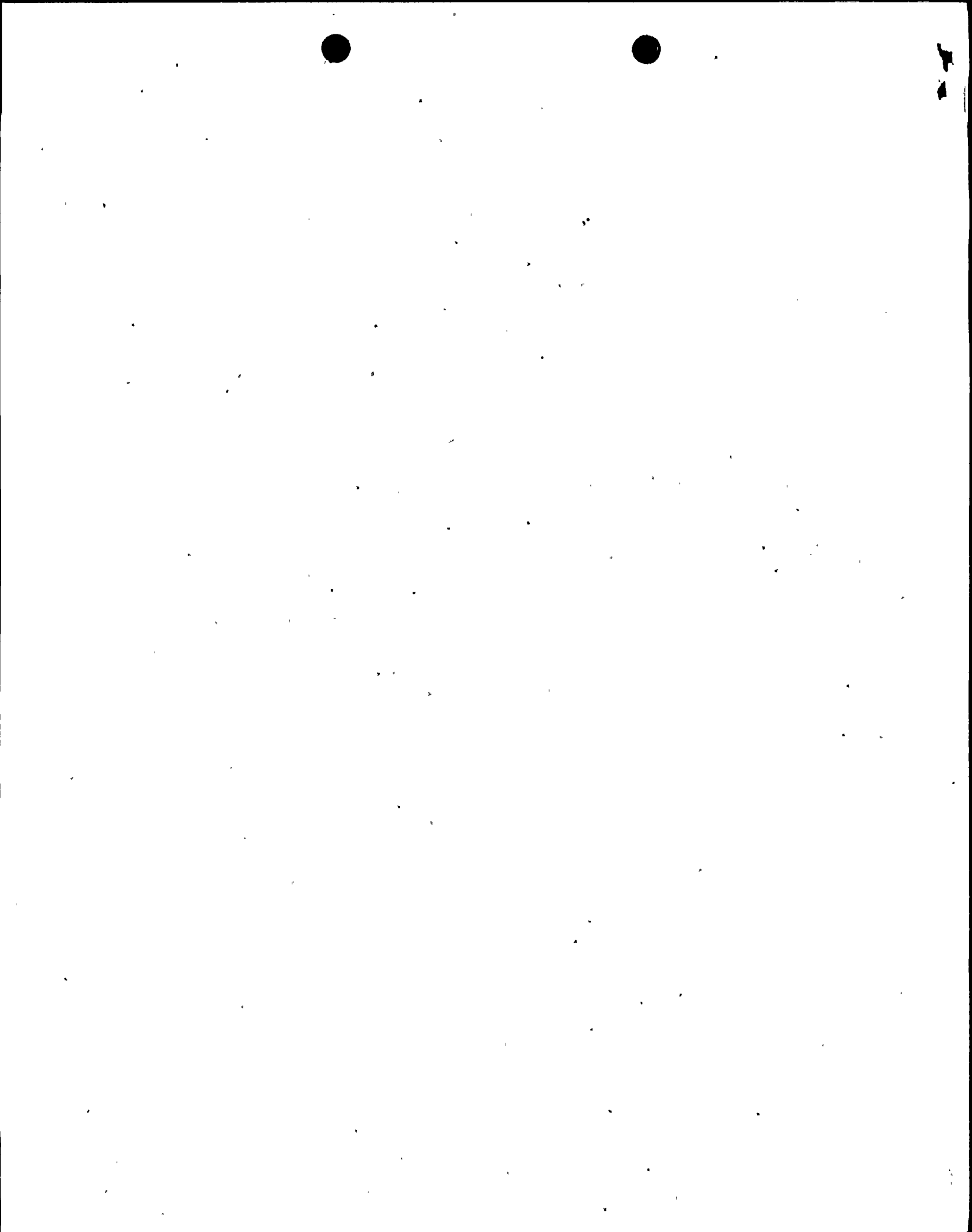
The event was initiated by closure of the Main Steam Line D inboard MSIV that was due to a failure of the instrument air tubing to the valve's actuator.

The plant transient from the closure of the MSIVs resulted in a rapid reactor pressure increase. This pressure increase resulted in the initial reactor scram signal on high reactor power. The pressure increase was mitigated by the actuation of safety relief valves. Additionally, reactor water level rapidly decreased to the low-low level set point (lowest recorded level was approximately -50"). This was consistent with the level described in the safety analysis for this event. The low-low level resulted in the automatic initiation of the high pressure core spray (HPCS) and the reactor core isolation cooling (RCIC) systems. These systems subsequently isolated automatically on high reactor vessel level, as designed, about one minute after actuation. The RCIC system was later operated manually to maintain reactor vessel inventory and facilitate control of reactor pressure.



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Following the reactor scram, drywell pressure increased to slightly above 1.6 psig because of the isolation of the reactor closed cooling water system, which provides normal cooling to the drywell. The isolation was an expected response to the low-low reactor vessel level experienced during the initial moments of the event. The elevated drywell pressure was close to the design set point of the actuation system (1.65 psig) and was sufficient to actuate some pressure switches in the actuation system, given the tolerances allowed for switch settings. This resulted in starting the plant's emergency diesel generators automatically. Since off-site power was available to the plant, the emergency diesel generators did not load their respective buses. No low pressure emergency core cooling systems were required or actuated.

The team's inspection in several charter areas is ongoing. RCIC operation during the event had several anomalies, including an unexpected trip after manual initiation and difficulty establishing the pressure control mode. Operator and crew response to the event and recovery, along with applicable training, are also under review, as is the accuracy of the response of the plant reference simulation facility. The event revealed a number of operator work-arounds that had not been previously identified by the licensee. The team is also following the licensee's event analysis and corrective actions. The team currently plans to complete its inspection by March 17, 1998.

The licensee plans to brief the NRC before restarting the plant.

The state of Washington has been informed.

Region IV received notification of the additional information in this update through its inspection team. Region IV has informed EDO/NRR/PA of this update.

This information has been discussed with the licensee and is current as of 10:00 a.m. (PST), March 16, 1998.

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