

CO Inquiry Report 50-220/71-04

Subject: Niagara Mohawk Power Corporation

License No.: DPR-17

Facility: Nine Mile Point (BWR)

Title: Main Steam Line Flow Anomaly

Prepared by: R. L. Spessard, Reactor Inspector

9/29/71  
Date

A. Date and Manner AEC was Informed:

September 24, 1971, during the weekly telephone contact with Mr. Al Burt, Station Superintendent, to obtain plant status information.

B. Description of Event:

1. On September 20, 1971, with the reactor in a shutdown condition (for replacement of failed fuel) an inspection of one of the two main steam line flow restrictors was performed because of an anomaly experienced in indicated steam flow during operation prior to the shutdown.
2. Mr. Burt reported that a crack had been identified in the instrument impulse line at the K<sub>2</sub> sample point (low pressure) inside the restrictor. The line was described as 7/8 inch stainless steel tubing with a 35 mil wall thickness. The crack was reportedly found by breaking a line coupling close to the restrictor and looking inside the impulse line. The manufacturer of the flow restrictors was reported to be Builders Iron Foundry, Providence, R. I.
3. Mr. Burt stated that during operation it was observed that the indicated steam flow in one line was two-thirds the indicated flow in the other line. Examination of operating data indicated that the measured  $\Delta P$  from one of the flow restrictors was less than the true value for the actual flow conditions. The actual steam flow in each line was reported to be  $3.1 \times 10^6$  lb/hr @ 17.75 psid, but the one restrictor in question gave a reading of 7.75 psid for a steam flow of  $2.1 \times 10^6$  lb/hr.
4. Mr. Burt stated that because of the steam flow anomaly the steam flow signal fed to the feedwater flow controller was biased in order to maintain the proper reactor vessel water level during operation.

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5. Mr. Burt stated that the high stream flow setpoint (105 psid) for steam line isolation in the event of a steam line rupture outside of containment was not changed (lowered) for the affected  $\Delta P$  trip sensors. Mr. Burt stated that the design of the main steam line high flow trip logic is such that the failure of the  $\Delta P$  trip sensors on any one steam line will not negate the main steam line high flow protection system.

C. Action by Licensee:

1. The manufacturer (Builders Iron Foundary) has been contacted by the licensee and a detailed investigation of this matter is planned following the refueling operations currently in progress.
2. The licensee does not consider this event to be reportable in writing to DRL under the provisions of the Technical Specifications and does not consider it to be of safety significance since a steam line break is monitored by either  $\Delta P$  channel.