

**DUKE POWER COMPANY**  
**NUCLEAR PRODUCTION DEPARTMENT**  
**P.O. BOX 33189, 422 SOUTH CHURCH STREET**  
**CHARLOTTE, N.C. 28242**  
**(704) 373-4011**

June 5, 1985

Division of Environmental Management  
Water Quality Section  
P.O. Box 27687  
Raleigh, NC 27611

**SUBJECT:** Noncompliance Notification  
McGuire Nuclear Station  
**FILE:** MC-704.20

Dear Sir:

This is to notify you of a noncompliance incident at McGuire Nuclear Station. Information related to the incident is as follows:

**Discharge -**

The discharge was an unauthorized discharge through the collection basin to the Catawba River below Cowans Ford Dam.

**Cause of Noncompliance -**

A 150 gal. tank of 2.7% hydrazine and a 75 gal. tank of 15% ammonium hydroxide were released to the turbine building sump while the sump was being used for conveying Lake Norman water from Unit 1 condenser unwatering operations to the collection basin. The highest discharge pH measured was 9.5 standard units.

**Date and Time -**

The tank contents were released between 9:00 and 9:30 AM, May 31, 1985.

**Prevention -**

The Turbine Building sump was routed to the Conventional Wastewater Treatment Facility (NPDES Outfall No. 002) at 10:39 AM, May 31, 1985. The situation is being investigated and changes will be implemented to prevent future occurrences because of these conditions.

**Summary -**

On May 31, 1985 hydrazine and ammonium hydroxide were inadvertently released to the collection basin and thence to the Catawba River below Cowans Ford Dam. The hydrazine concentration of the discharge from the collection basin did not exceed 92 ppb, which implies compliance with the 24-hr instream average administrative limit of 60 ppb based on 36,000 gpm leakage through Cowans Ford Dam and 1122 gpm flow measured at the collection basin during the incident. The hydrazine concentration had dissipated to below analytical detection limit by 9 AM, June 1, 1985. The collection basin discharge

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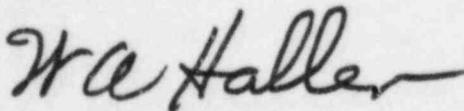
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exceeded pH 9.0 from approximately 1:00 PM to 11:30 PM, May 31, 1985. The highest measured discharge pH was 9.5 standard units. A sample collection in the discharge stream where it flows into the Catawba River showed pH 8.9. While discharge pH exceeded 9.0 units, it was not clear that it was due entirely to ammonium hydroxide. The collection basin discharge before the release could have gotten there was measured at pH 9.0; also the pH at collection basin coves not likely to be affected by the release, measured as high as 9.4 units with no detectable hydrazine. These pH observations in the basin, plus the fact that the basin water was greenish, and the discharge total alkalinity at 5:45 PM, May 31 (pH 9.3, hydrazine = 67 ppb) was fairly low at 17 mg/l as CaCO<sub>3</sub> compared to a Catawba River sample adjusted to the same pH having a total alkalinity of 29 mg/l, indicate the pH was elevated in large part due to algal photosynthesis.

If you have any questions concerning this discharge please call R. T. Simril at 704/373-2310 or J. E. Hogan at 704/373-5763.



W. A. Haller, Manager  
Nuclear Technical Services

JEH/wmc

cc: R. Gleason  
T. L. McConnell  
M. D. McIntosh  
H. R. Denton/Attn: E. G. Adamsam