

DUKE POWER COMPANY
P.O. BOX 33189
CHARLOTTE, N.C. 28242

WILLIAM A. HALLER
MANAGER
NUCLEAR TECHNICAL SERVICES
(704) 373-8308



August 18, 1989

Mr. Robert R. Knauss
Environmental Quality Manager
Water Quality Assessment & Enforcement Division
S.C. Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Subject: Catawba Nuclear Station
Notification of Incident
Discharge of Sodium Nitrite
File: CN-702.26, CN-707.03

Dear Sir:

On July 28, 1989, an incidence of an unauthorized discharge that had occurred in May at the Duke Power Company Catawba Nuclear Station was discovered by way of a review of wastewater inventory records. On August 3, 1989, W. T. Griffin, of this office, discussed with you delaying written notification of this incident such that the SARA Follow-up Release Notification report could be utilized as the written NPDES report. This letter is to serve as our NPDES written response. Attached is the SARA Follow-up Release Notification report.

We are amenable to arranging a meeting with you in order to address the specifics of this incident or the actions we are taking to prevent a future recurrence should you think it beneficial. Should you have any questions or desire additional information, please contact M. C. Griggs [(704) 373-7080].

Sincerely,

W. A. Haller, Manager
Nuclear Technical Services

WTG/ggb:0272

Attachment

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

August 18, 1989

South Carolina Emergency Response Commission
Stan M. McKinney, Chairman
Division of Public Safety Programs
Edgar A. Brown Building
1205 Pendleton Street
Columbia, SC 29221

York County Emergency Preparedness Agency
Cotton Howell
155 Johnson Street
P. O. Box 11706
Rock Hill, SC 29731

Subject: Catawba Nuclear Station
Superfund Amendments and Reauthorization Act (SARA)
Follow-up Release Notification - Sodium Nitrite Release
File: CN-707.03, CN-702.00

Dear Sirs:

Pursuant to 40CFR Part 355 (Emergency Planning and Notification), Duke Power Company hereby provides written follow-up emergency notice of a reportable SARA release. On July 28, 1989, a review of station wastewater inventory records revealed that a greater than reportable quantity release occurred during the time period from May 10, 1989 to May 16, 1989 and verbal notification of this release was provided to your offices on July 28, 1989.

Sodium nitrite is not classified as an Extremely Hazardous Substance under SARA; however, it is classified as a CERCLA Hazardous Substance. As indicated on the Attachment, an amount of sodium nitrite greater than the 100 pound CERCLA reportable quantity was released on three occasions over the May 10-May 16, 1989 time period. Also indicated on the Attachment are the calculated concentrations that were discharged to Lake Wylie, which ranged from 3.5 to 5.6 ppm sodium nitrite.

The following agencies were contacted on July 28, 1989 and informed of the release:

<u>Agency</u>	<u>Contact</u>	<u>Time</u>
National Response Center	Mike King	1950
South Carolina Department of Health and Environmental Control	Wayne Corley	2105
York County Emergency Preparedness Agency	Cotton Howell	2100
Nuclear Regulatory Commission	(via Red Phone)	2020

In determining the acute or chronic health risks associated with the release, the following factors were considered:

1. The Food and Drug Administration (FDA) allows 200 ppm maximum sodium nitrite in fish and meat as a preservative or color fixative; therefore there should be no impact to human health from this release.
2. In 1988, using dye, flow characterization studies were conducted on the station's cooling water discharge into Lake Wylie. Assuming cooling water discharge flow similar to that during these studies, the chemical concentrations in this discharge, as measured in the discharge cove approximately 2600 feet away from the station discharge point, would typically be reduced by 90% of their original concentration by the time they reached this point.
3. The 48 and 96 hour LC50 data reveals the following acute toxicity values for fish exposed to sodium nitrite:

<u>Organism</u>	<u>Test Conditions</u>	<u>Effects</u>
Mosquitofish	*pH 7.1-7.4	**96 hr. LC50 = 7.5 ppm
Bluegill	pH = 7.2	**48 hr. LC50 = 211.3ppm

* Average lakewater pH falls within this range.

** 48 hour and 96 hour LC50 data reflect the concentration of a chemical constituent at which 50% of the population of a species would die if exposed to this concentration for 48 or 96 hours, respectively.

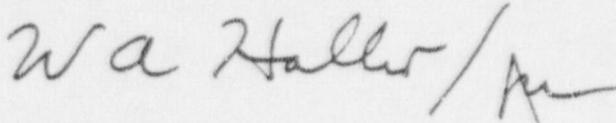
At the time verbal notifications were made to the National Response Center, the South Carolina Department of Health and Environmental Control, and the York County Emergency Preparedness Agency, the individual making the notifications had a general knowledge of the LC50 data and of the flow characterization dye study results. This individual conveyed in these verbal reports that no significant impact to the environment or to human health would have resulted from the release.

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Duke Power Industrial Hygiene personnel also concluded that based on the above three factors there was no significant relative acute or chronic health risks associated with this release. Additionally, no environmental impact was seen subsequent to the release based on routine daily inspection of the discharge area by station personnel.

Additional administrative controls are being established to prevent a reoccurrence of this type of release. Specifically, station personnel are reviewing existing procedures that involve wastewater releases to the environment and are making changes as appropriate to prevent a reoccurrence of this type incident. In addition, station training modules will be refined to ensure appropriate personnel are made aware of this incident. Training will be conducted through the station's Employee Training and Qualification Program (ETQS) which is an Institute of Nuclear Power Operations (INPO) accredited program.

If you have any questions concerning this notification, please contact Mark Hollis at (704) 373-2758 or Hilary Sommer at (704) 373-2374.



W. A. Haller, Manager
Nuclear Technical Services

HLS/RRW/ggb:0257

Attachment

xc: Paul Wise, DHEC - Fort Lawn District
NRC Regional Administrator

Attachment

Liquid Waste Releases (LWR) From 5/10/89 to 5/16/89

<u>LWR</u>	<u>Date</u>	<u>Start</u>	<u>Stop</u>	<u>Gal Released</u>	<u>Monitor Tank ppm Sodium Nitrite</u>	<u>Sodium Nitrite (End of pipe discharging to lake)</u>
368	5/10	1545	1641	4530	1885	3.72
369	5/10	2027	2111	3660	1885	4.12
370	5/11	0011	0054	3470	1885	4.02
383	5/13	2250	2337	3660	2175	4.98
385	5/14	1549	1625	3690	2175	5.57
386	5/15	0839	0937	3700	2175	3.48
388	5/16	0305	0345	3600	2175	4.89

Sodium Nitrite Releases in Excess of CERCLA/SARA Limits:

<u>Date</u>	<u>Total lbs. Released</u>	<u>Highest NaNO₂ concentration, ppm (end of pipe discharge to lake)</u>
5/10-5/11	182	4.12
5/13-5/14	133	5.57
5/15-5/16	132	4.89