

TENNESSEE VALLEY AUTHORITY
KNOXVILLE, TENNESSEE 37902

FEB 29 1988

Mr. Philip L. Stewart, Manager
Chattanooga Field Office
Division of Water Pollution Control
2501 Milne Street
Chattanooga, Tennessee 37406-3399

Dear Mr. Stewart:

WATTS BAR NUCLEAR PLANT (WBN) - NPDES PERMIT NO. TN0020168 - COMPLIANCE
EVALUATION INSPECTION REPORT AND NOTICE OF VIOLATION

This is in response to your December 7, 1987, letter. As requested in your comments on Deficiency 3, enclosed is the information regarding the routing of the condenser cooling water system and the various other waste discharges at WBN. Should you require additional information, we invite you and your staff to visit WBN so that we can show you the routing of various discharges and answer any additional questions. The enclosure also addresses the resolution of Violation 4 regarding pH sampling and gives an update of outstanding commitments for providing other compliance information.

If a site visit is desired or if there are any questions regarding the enclosed information, please have your staff call Madonna E. Martin at (615) 632-6695 in Knoxville.

Sincerely,
ORIGINAL SIGNED BY
RALPH H. BROOKS

Ralph H. Brooks, Director
Environmental Quality

Enclosure

cc (Enclosure):

Mr. K. P. Barr, Acting Assistant Director
for Inspection Programs
TVA Projects Division
Office of Special Projects
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 2900
Atlanta, Georgia 30323

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Mr. Philip L. Stewart

cc: Mr. Kenneth W. Bunting, Director
Division of Water Pollution Control
Tennessee Department of Health
and Environment
150 Ninth Avenue, North
TERRA Building
Nashville, Tennessee 37219-5404

Mr. Douglas K. Lankford, Chief
South Carolina/Tennessee Unit
Facilities Performance Branch
Water Management Division
U.S. Environmental Protection
Agency, Region IV
345 Courtland Street, NE.
Atlanta, Georgia 30365

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

Mr. G. G. Zech, Assistant Director
for Projects
TVA Projects Division
U.S. Nuclear Regulatory Commission
One White Flint, North
11555 Rockville Pike
Rockville, Maryland 20852

ENCLOSURE

FOLLOWUP INFORMATION AND RESPONSE
TO STATE COMPLIANCE EVALUATION INSPECTION REPORT
OF WATTS BAR NUCLEAR PLANT (WBN)

Deficiency 3 - Description of WBN Flow Paths:

The following are answers to your questions 1 through 7 regarding Deficiency 3.

1. The cooling tower desilting basin discharge pipeline (DSN 108) originally discharged into the northeast portion of the yard holding pond (YHP). When this portion of the pond was diked off, DSN 108 was rerouted to the west side of the cofferdam (see attached drawing) so that release of DSN 108 would be to that portion of the YHP which contains water. The permanent release location for DSN 108 into the YHP will be determined when the modifications to the YHP (to increase the pond volume) are finalized. However, nonoperational and operational routing of DSN 108 will still go to that portion of the YHP which contains water.
2. Essential raw cooling water (ERCW) discharges into the YHP at approximately midway between the cofferdam and the YHP skimmer wall (see attached drawing). The ERCW pipeline terminates at the riprap which lines the northern bank of the YHP.

During normal operation, ERCW exits the auxiliary building and discharges to the cooling tower basin flume through the 36" pipeline labeled "ERCW DISH" on the TVA drawing 47W831-1, R18, which was provided to your office with our November 17, 1987, response. These pipes are connected to the ERCW pipeline which can discharge to the YHP.

3. The raw cooling water (RCW) and ERCW are separate systems. Both systems discharge into the cooling tower basin flume separately and mix with the condenser cooling water (CCW). This mixture of water enters either the CCW conduit which goes back to the plant to supply the main condenser or flows over the cooling tower blowdown weir and through the cooling tower blowdown pipeline to the diffuser.
4. The liquid radwaste system (DSN 104), steam generator blowdown system (DSN 106), and condensate demineralizer system (DSN 105) all tie together near the point of connection to the 48" cooling tower blowdown pipeline. The connections are made underground at a point which is closer to the cooling towers than to the diffuser discharge manholes.
5. The point at which DSN 105 enters the cooling tower blowdown pipeline is common to DSN 104 and DSN 106 as shown on TVA drawing 47W831-1, R18, enclosed with our November 17, 1987, response (and as stated in item 4 above). DSN 105 does not have a crosstie connection to the RCW system.
6. The neutralization tank (DSN 109) can be routed to the CCW system. See the attached drawing for the location. However, the primary route for the neutralization tank is to the turbine building station sump (TBSS).

DSN 109 does not join the ERCW system.

7. The TBSS normally receives waste from DSN 105 and DSN 109. The TBSS can be discharged to the metal cleaning waste ponds, the yard holding pond, or the low volume waste treatment pond. Normal routing of the TBSS is to the low volume waste treatment pond.

We hope this information will satisfy your needs concerning the cooling water discharge system. Scaled drawings depicting this information do not exist and would require an extensive effort to develop. If you still require a drawing after reviewing this response, we request that you meet with TVA staff and tour the areas in question. Then, we can define in detail the type drawing that may be necessary.

You are correct in your interpretation that flow from the desilting basin is going into the YHP and not through the diffuser (DSN 101). However, we do not believe the monitoring requirements and effluent limitations in the NPDES permit for desilting basin effluent (DSN 108) should be applicable during the period when the cooling tower blowdown line is out of service. The desilting basin was designed to treat the wastewater generated during flushing of sediment from the cooling tower basins. During such operations, the desilting basin would be operated in a batch mode. Currently, the desilting basins are only being used to route plant discharges (that would normally go out the cooling blowdown line) to the YHP, where treatment is provided. Flow through the desilting basin is continuous and receives no treatment. We propose that the following sentence be added to the Discharge Monitoring Report for DSN 108: "Monitoring requirements and effluent limitations are not applicable because the desilting basin is being used to route plant flow to the yard holding pond while the cooling tower blowdown line is out of service for repairs."

Notice of Violation 4 - pH Measurements:

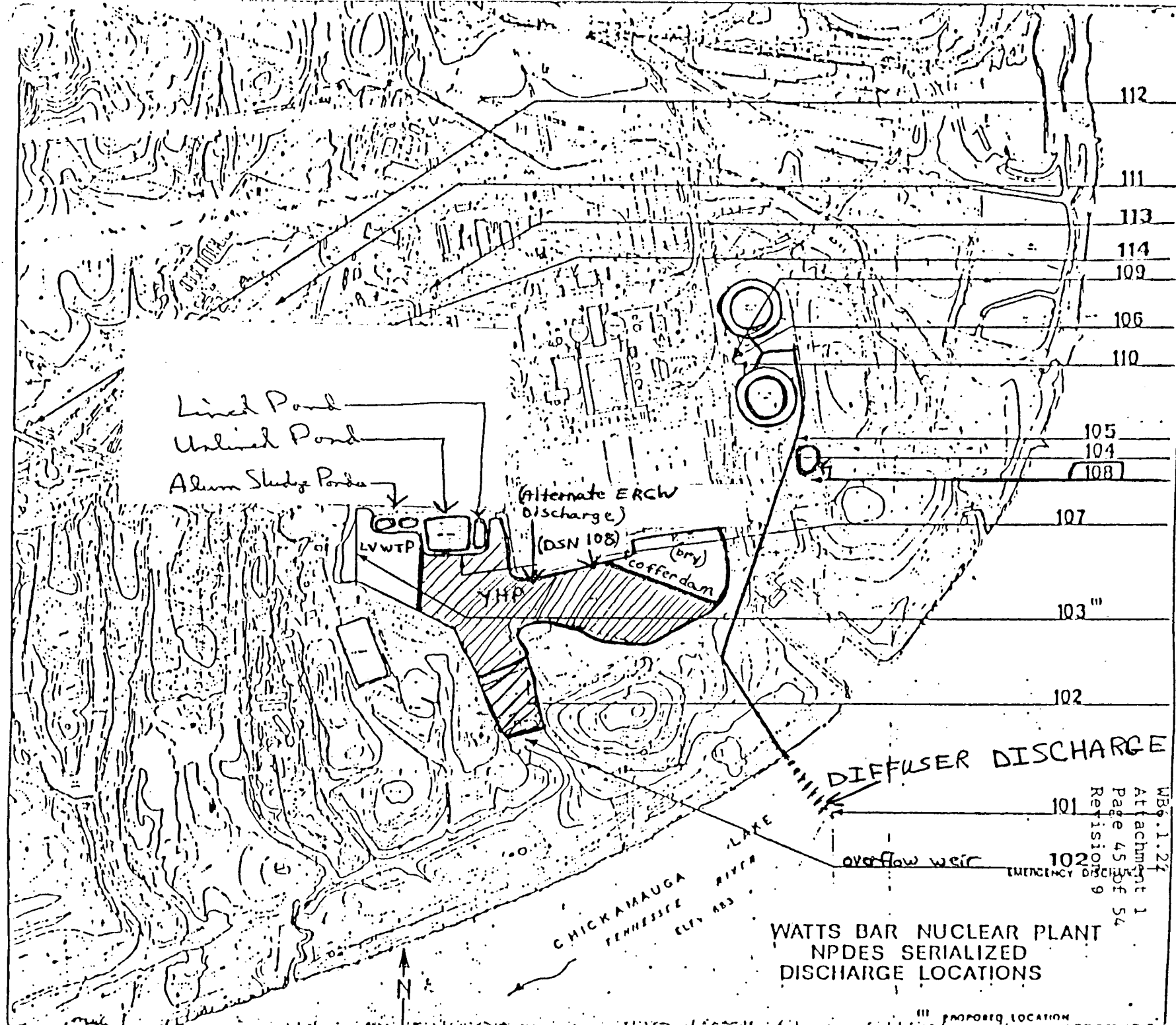
We appreciate the clarification of the State's requirements for pH measurements. Determinations for pH will be made as soon as the sample is collected and labeled, generally within 15 minutes (49 Fed. Reg. 43243, October 26, 1984). Precautions will be taken to avoid sample degradation until the analysis is performed. Sample collection and analysis times will be recorded on the laboratory records.

Deficiency 4 -Sewage Treatment Plant Splitter Box Modifications:

The modifications to the splitter box were performed the weekend after Thanksgiving. The data will be provided to your office on schedule and under separate cover.

Notice of Violation 1 - Chlorine Analyzers:

The chlorine analyzer data will be provided to your office on schedule.



WATTS BAR NUCLEAR PLANT
NPDES SERIALIZED
DISCHARGE LOCATIONS

WB-1.24
Attachment 1
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Revision 9
EMERGENCY DISCHARGE

WBN