

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

April 30, 1991

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Serial No. 91-249
NAPS/JHL
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

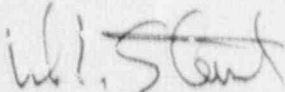
Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2
ANNUAL ENVIRONMENTAL OPERATING REPORT

Pursuant to Section 5.4.1 of Appendix B, Environmental Protection Plan, enclosed is the Annual Environmental Operating Report for North Anna Power Station Unit Nos. 1 and 2 for 1990.

If you have any questions or require additional information, please contact us.

Very truly yours,



W. L. Stewart
Senior Vice President - Nuclear

Enclosure

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. M. S. Lesser
NRC Senior Resident Inspector
North Anna Power Station

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VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
UNITS 1 AND 2

APPENDIX B
ENVIRONMENTAL PROTECTION PLAN
1990 ANNUAL REPORT
DOCKET NOS. 50-338 AND 50-339

INTRODUCTION

This 1990 Environmental Operating Report for the North Anna Power Station is submitted by Virginia Electric and Power Company as required under Section 5.4.1 of Appendix B, Environmental Protection Plan (EPP). The objectives of the EPP are to verify that the power station is operated in an environmentally acceptable manner; to coordinate NRC requirements; and maintain consistency with other federal, state and local requirements; and to keep NRC informed of the environmental effects of facility construction and operation. During 1990, no significant adverse environmental impact occurred as a result of the operation of North Anna Power Station, Units 1 and 2. Aquatic issues are addressed in the licensee's NPDES permit number VA 0052451 issued by the Virginia State Water Control Board and the NRC relies on this agency for regulation of matters involving water quality and aquatic biota. Listed below are the summaries and reports as required under Section 5.4.1 of the EPP.

PLANT DESIGN AND OPERATION (SECTION 3.1)

There were no changes in station design or operation proposed in 1990 that involved a potentially significant unreviewed environmental issue.

TRANSMISSION LINE RIGHT OF WAY HERBICIDE MANAGEMENT (SECTION 4.2.1)

The herbicide, Spike 5G, was used for brush control around tower foundations on the North Anna - Louisa and North Anna Ladysmith 500 KV lines during 1990. No herbicides were used for brush control on the North Anna - Midlothian 500 KV lines or the North Anna - Gordonsville 230 KV lines during 1990.

TRANSMISSION LINE RIGHT OF WAY EROSION CONTROL INSPECTION
(SECTION 4.2.2)

Erosion inspections of rights of way were conducted for the North Anna - Midlothian, North Anna - Louisa, and North Anna - Ladysmith 500 KV lines and on the North Anna - Gordonsville 230 KV line on July 27, 1990. Locations were recorded of eroded areas on the North Anna Gordonsville, North Anna - Midlothian, North Anna - Louisa and the North Anna - Ladysmith lines. Most of these eroded areas were caused by vehicle travel along the right of way. All areas were disced, fertilized, seeded and mulched and additional straw bales were installed to prevent erosion.

STATION SITE EROSION CONTROL (SECTION 4.2.2)

An on-site erosion control inspection was performed at North Anna Power Station by the Civil/Design Engineering Department beginning November 7, 1990 and ending on December 4, 1990, according to Periodic Test Procedure 1-PT-9.3, Erosion Control Inspection - Station Site. Although erosion was minor or non-existent in most areas, several sites were found where slight erosion, or potential erosion, problems needed to be addressed. Erosion and undermining were noted around paved drainage ditches in two locations, behind the main station parking lot and adjacent to the recreation area. Soil and grass were found to be impeding flow in the paved drainage ditch on the South side of the unit three restoration area. Also, a drainage pipe running under the road in the vicinity of the discharge canal was found to be crimped and impeding flow.

STATION SITE EROSION CONTROL (SECTION 4.2.2) (cont.)

Erosion was noted around the discharge line in the unit three restoration area, and the newly installed drain pipe in the sedimentation pond was found to be leaking, causing erosion at its base. Erosion was also found around the access pipe southwest of the Security and Construction Building; outside the security fence between the fence and drainage ditch south of the station, and around the rainage ditch on the north slope of the southwest emergency drainage ditch. Finally, soil around the fire sheds was determined to be improperly compacted to prevent erosion.

Repairs have been initiated for the ten items mentioned above. The Rad Waste facility in the Unit 3 and 4 area is partially constructed and presently on hold. The adjacent flood protection dike has been completed.

NONCOMPLIANCE (SECTION 5.4.1)

There were no Environmental Protection Plan occurrences of noncompliance during 1990. There was, however, one situation which occurred during 1989 but, was not discovered until 1990. The NRC was not furnished a courtesy copy of an NPDES permit renewal application to the Virginia Water Control Board. A copy of this correspondence has since been submitted to the NRC and corrections have been made to the reporting procedure to ensure this problem does not occur again.

NONROUTINE REPORTS (SECTION 5.4.2)

Enclosed are copies of letters detailing the occurrence of two unusual discharges (pages 5 - 8) and one historical oil spill (pages 9 - 12)

NONROUTINE REPORTS (SECTION 5.4.2) (cont.)

which were filed during 1990 in which appropriate state agencies were notified. There were no NPDES exceptions during 1990. None of the reported events resulted in a significant environmental impact causally related to station operation.

COR 14
Unusual Discharge
North Anna

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

July 23, 1990

Mr. William L. Kregloe
Virginia Water Control Board
Valley Regional Office
116 North Main Street
P. O. Box 268
Bridgewater, Virginia 22812

Re: Unusual Discharge at North Anna Power Station

Dear Mr. Kregloe:

On July 19, 1990, partially processed water from the Reverse Osmosis (RO) system at North Anna was directed to a storm drain in error by our contractor, Ionics, Corp. Upon discovery the discharge was immediately discontinued and you were notified. This letter confirms that conversation.

As you know, the RO system was recently placed in its permanent configuration. Discharges from the system are included in the VPDES permit soon to be reissued. Backwash from the system is discharged to the settling pond, the RO reject, after relocation, is directed to the discharge tunnel, and a cold weather drain line is discharged to Lake Anna. It was thought that all discharges were accounted for. Investigation revealed, however, that partially processed water that does not meet stringent requirements for plant makeup is blown down from individual resin beds on an intermittent basis when the resins are spent and require replacement. This blowdown has apparently occurred twice since the reconfiguration in late June, on July 10 and July 19. Approximately 500 gallons of blowdown were discharged on July 10 and perhaps 200 gallons on July 19 before the discharge was interrupted.

The discharge properly should be included as part of the RO reject. Alteration of the piping to include this discharge is currently being evaluated. The outlet to the stormdrain has been permanently capped and no further discharge is anticipated. We will inform you when a permanent solution has been implemented.

Mr. William L. Kregloe
July 23, 1990
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If you have any further questions regarding this incident, please contact my office.

Sincerely,

Michael F. Kadlubowski

B. M. Marshall, P.E. *for*
Manager
Water Quality

cc: U. S. NRC
Docket No. 50-338/50-339
101 Marietta Street, NW
Suite 2900
Atlanta, Georgia 30323

U. S. NRC
Attn: Docket Control Desk
Docket No. 50-338/50-339
Washington, D.C. 20555

NRC Senior Resident Inspector
Docket No. 50-338/50-339
North Anna Power Station

bc: Mr. E. W. Harrell
Mr. J. L. Wilson
Mr. G. E. Kane
Mr. K. N. Kappatos *JAS*
Mr. J. A. Stall *by telephone 7-23-90*
Mr. W. A. Thornton
Mr. A. H. Stafford
Mr. M. C. Hensley
Mr. A. C. Cooke
Mr. O. P. Sloan
Mr. K. L. Williamson
Mr. P. A. Kemp
Mr. M. F. Kadlubowski
Ms. G. R. Knauer *CK*
File COR 14 - Unusual Discharge

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

November 13, 1990

Mr. William L. Kregloe
Virginia Water Control Board
Valley Regional Office
116 North Main Street
P. O. Box 268
Bridgewater, VA 22812

RE: UNUSUAL DISCHARGE OF PURIFIED WATER -
NORTH ANNA POWER STATION

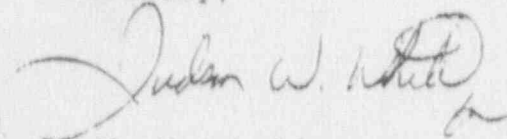
Dear Mr. Kregloe:

This letter confirms the report made to you by telephone on November 9, 1990, regarding a discharge of water from the Reverse Osmosis System at North Anna Power Station. Contact with your office was first made at approximately 9:00 a.m.

The discharge was discovered by contract station personnel at approximately 2:30 a.m. on the 9th. A flange on the discharge line broke causing purified water to overflow a drain inside the treatment trailer and flow to a storm drain. It is estimated that the flange probably broke around 12 o'clock midnight and discharged some 10,500 gallons of water to Lake Anna. Upon discovery of the discharge, pumping was shut down and repair of the flange initiated. Repair was complete within 24 hours.

No adverse environmental impact was expected or observed as a result of this discharge. To prevent recurrence, lines will be inspected more frequently in the future. If you have any questions regarding this incident, please contact this office.

Sincerely,


B. M. Marshall, P.E.
Manager
Water Quality

Mr. William L. Kregloe
November 13, 1990
Page 2

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Docket No. 50-338/50-339
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cc: E. W. Harrell
J. L. Wilson
G. E. Kane
K. N. Kappatos
W. A. Thornton
A. H. Stafford
A. C. Cooke
P. A. Kemp
M. F. Kadlubowski
G. R. Knauer

April 23, 1990

Mr. Larry M. Carpenter
Environmental Specialist Sr.
Valley Regional Office
Virginia State Water Control Board
P.O. Box 268
Bridgewater, Va. 22812

RE: Subsurface Leak of Fuel Oil at North Anna Power Station

Dear Mr. Carpenter:

On April 19, 1990 Mr. W. A. Sprouse of my staff reported a historical fuel oil leak at North Anna Power Station. This letter documents the information conveyed at that time to Mr. J. D. Green and the phone conversation between you and Mr. Sprouse on April 20, 1990.

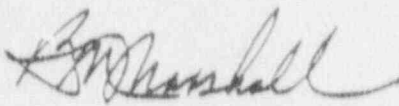
On May 27, 1987, station personnel observed oil seeping to the ground surface above an underground fuel oil line which feeds an aboveground tank from a tank truck unloading station. The line was repaired and returned to service.

The line was removed from service when, on June 5, 1987, evidence of another possible leak was observed. The line has been out of service since that time and came to this Department's attention when we were asked to review plans for replacement of the pipe. Station personnel do not believe the oil reached the groundwater, nor were they aware at the time that releases which may reach the groundwater are reportable. A subsurface drainage system, known as the Mat Sump System, collects and removes groundwater from around the reactor containment structures. Groundwater pumped from this system has not shown evidence of fuel oil contamination.

At this time, we are uncertain of exactly how much fuel oil was involved. Per your request, we will determine if any of the oil reached groundwater and will keep you informed of further developments.

Please contact Wes Sprouse at (804)273-3552 if you have any further questions.

Sincerely,



B. M. Marshall P.E.
Manager, Water Quality

August 29, 1990

Mr. Larry M. Carpenter
Environmental Specialist Sr.
Valley Regional Office
Virginia Water Control Board
P. O. Box 268
Bridgewater, VA 22812

RE: SUBSURFACE HYDROCARBON INVESTIGATION - NORTH ANNA POWER STATION

Dear Mr. Carpenter:

On July 6, 1990, Wes Sprouse of my staff informed you of our efforts to install observation wells for the above referenced project. This letter is to document that information and to report the status of the fuel oil line replacement project.

After reviewing site drawings of the underground structures in the vicinity of the leaks, Virginia Power personnel performed a soil gas survey in an attempt to determine the extent of contamination. The survey indicated that some degree of contamination exists at the western end of a concrete slab, north of the clarifier building (see attached sketch). Following further review by the station attempts were made to place two borings downgradient of the area indicated by the soil gas results. The crew made six attempts to place borings; however, each encountered auger refusal on concrete and rock. The deepest boring reached seven feet, with no groundwater encountered. A layer of clay was identified at a depth of approximately five feet.

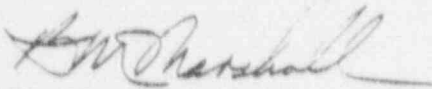
The possible locations of the borings are limited by the layout of underground utilities at the site. As there were no other appropriate locations available, we made no further borings.

The station had planned to replace the line in 1990; however, material availability and schedule considerations dictate that the project be postponed until Spring of 1991. At that time the line will be excavated and we will be able to determine the extent of the contamination. We feel that the potential for migration is minimal given the site geology: a confining layer of clay below the pipeline, underlain by bedrock. We will contact you next Spring when the project commences.

Mr. Larry M. Carpenter
August 29, 1990
Page 2

If you have any questions or desire additional information, please
contact Wes Sprouse at (804) 273-3552.

Sincerely,



B. M. Marshall, P.E.
Manager
Water Quality

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North Anna Power Station

bc: E. W. Harrell - INN/2E
J. L. Wilson - INN/2E
G. E. Kane - NA
R. O. Enfinger - NA
K. N. Kappatos - ODEC
W. A. Thornton - INN/2E
A. H. Stafford - NA
A. C. Cooke - NA - *AL Cooke by phone*
P. A. Kemp - NA
M. F. Kadlubowski
G. R. Knauer
J. W. White
W. A. Sprouse, Jr. *WAS*

