

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

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April 1, 1983

U.S. Nuclear Regulatory Commission  
Region II  
ATTN: James P. O'Reilly, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

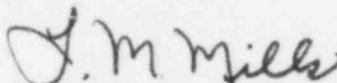
Enclosed is our response to your February 25, 1983 letter to H. G. Parris transmitting Inspection Report Nos. 50-259/82-44, -260/82-44, -296/82-44 regarding activities at our Browns Ferry Nuclear Plant which appeared to have been in violation of NRC regulations. We have enclosed our response to Appendix A, Notice of Violation. A four-day extension on the submittal of this response was discussed with and granted by NRC Inspector Ross Butcher on March 29, 1983. If you have any questions, please call Jim Domer at FTS 858-2725.

The actions detailed in the enclosed response reflect our continuing commitment to a well-controlled, technically qualified waste disposal program. TVA will continue to improve the program whenever possible and to work with NRC to resolve any problems encountered.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

  
L. M. Mills, Manager  
Nuclear Licensing

Enclosure

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PDR ADOCK 05000259  
G PDR

RESPONSE - NRC INSPECTION REPORT NOS.  
50-259/82-44, 50-260/82-44, AND 50-296/82-44  
J. P. O'REILLY'S LETTER TO H. G. PARRIS  
DATED FEBRUARY 25, 1983

Appendix A

Item A - (259, 260, 296/82-44-01)

10 CFR 20.301 requires that no licensee dispose of licensed material except: (a) by transfer to an authorized recipient as provided in Parts 30, 40, 70, or 72 of Title 10 to the Code of Federal Regulations; (b) as authorized pursuant to 10 CFR 20.302; or (c) as provided in 10 CFR 20.303 (disposed of by release into sanitary systems); or 10 CFR 20.106 (radioactivity in effluents to unrestricted areas).

Contrary to the above, between December 15, 1980 and November 16, 1982, the licensee transferred licensed material to unauthorized recipients and disposed of licensed material by means not provided for in the Code of Federal Regulations. A total of 995 microcuries was disposed of or transferred improperly according to licensee records.

This is a Severity Level IV Violation (Supplement IV).

1. Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

2. Reasons for the Violation if Admitted

Browns Ferry Technical Specification, Section 3.8 covers the controlled releases of radioactive liquids and gases and restricts these releases to the limits specified in 10 CFR Part 20. The specific limits listed address activity concentrations of gases and liquids in breathing air and drinking water respectively. However, 10 CFR Part 20 does not specify release limits for waste oil and other miscellaneous wastes that might contain low concentrations of activity. In the absence of specific release criteria for the release of waste, Browns Ferry used the limits specified in Appendix B, Table II, Column 2, for drinking water. These limits were first used at Browns Ferry in 1973 and were based on perceived conservative assumptions and compliance with applicable regulations. Because the limit for drinking water was applied to materials not intended for human consumption, it was assumed that this practice was conservative and posed no danger to the health and safety of the public.

The Appendix B limits were used for the release of debris deposited by river water flowing into condenser water boxes. Since the water boxes are located in a regulated area, the material must be surveyed for activity prior to release. The waste oil release also came from equipment located within a regulated area.

3. Corrective Steps Which Have Been Taken and the Results Achieved

The offsite disposal of waste oil and other miscellaneous wastes was immediately halted. TVA performed a radiation survey of Petroleum Recyclers Corporation, Inc.'s facility and on the grounds surrounding the plant where debris from circulating water boxes had been deposited. No radioactivity above background levels was detected.

An interim criteria (i.e., no detectable activity) for the removal of waste oil and other miscellaneous wastes from regulated areas was developed. These criteria were discussed with and agreed to by NRC in a November 24, 1982 conference call.

4. Corrective Steps Which Will Be Taken To Avoid Further Violations

TVA is reviewing applicable regulations including IE Information Notice No. 83-05 (Obtaining Approval for Disposing of Very Low-Level Radioactive Waste - 10 CFR Section 20.302) to ensure the adequacy of our disposal program. A formal request to allow TVA to apply the limits in 10 CFR Part 20, Appendix B, Table II, Column 2 to liquids, sludge, sand, gravel, and other such materials is also being considered.

5. Date When Full Compliance Will Be Achieved

Full compliance was achieved on February 4, 1983, when Technical Instruction 38 (procedure containing the interim release criteria) was issued.

Item B - (259, 260, 296/82-44-02)

10 CFR 20.201 states that as used in the regulations in 10 CFR 20, "survey" means an evaluation of the radiation hazard incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes . . . measurements of levels of radiation or concentrations of radioactive material present. Furthermore, each licensee shall make or cause to be made such surveys as: (1) may be necessary for the licensee to comply with the regulations in 10 CFR 20, and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present.

Technical Specification 6.3 requires procedures covering radiation control be prepared, approved, and adhered to.

Contrary to the above, Browns Ferry Procedure RLM 756, Procedure for Sampling Waste Oil Drums for MPC Ratio Determination, does not provide an adequate means of representative waste oil sampling and therefore fails to provide an adequate evaluation of radiation hazards that may be present.

This is a Severity Level IV Violation (Supplement IV).

1. Admission or Denial of the Alleged Violation

TVA admits the violation occurred as stated.

2. Reasons for the Violation if Admitted

Regulatory Guide (RG) 1.21 (Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants) was used as a basis for establishing Radiochemistry Laboratory Manual (RLM) procedure 756 (Sampling Waste Oil Drums for MPC Ratio Determination). To comply with the RG 1.21 requirements, RLM 756 specified that waste oil in a drum be mixed, using a stirring rod (with propellers attached) driven by a variable speed hand-held drill, before collecting a sample. RLM 756 also provided for compositing samples from multiple drums in order to reduce demands on laboratory analytical instrumentation.

The analytical results of composited samples were not used as the basis for releases. When the presence of significant amounts of activity was detected, waste oil was released based on an analysis of individual drum samples. The procedure was not checked for adequacy and sample representativeness on drums known to contain oil, water, and particulate matter. Such tests were conducted at NRC's request and it was discovered that representative samples were not being obtained from oil drums containing significant quantities of water.

3. Corrective Steps Which Have Been Taken and the Results Achieved

RLM 756 for sampling waste oil was revised. Prior to sampling, each drum is now checked for the presence of water. If water is detected, it is removed from the drum, and the remaining oil is mixed and sampled. Samples from multiple drums are no longer being composited.

4. Corrective Steps Which Will Be Taken To Avoid Further Violations

None.

5. Date When Full Compliance Will Be Achieved

Full compliance was achieved on March 15, 1983, when PLM 756 was revised.