Permit No. TN0027740

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Tennessee Valley Authority 268 401 Building Chattanooga, Tennessee 37401

is authorized to discharge from a facility located at

Hartsville Nuclear Plant Construction Project Smith and Trousdale Counties, Tennessee

to receiving waters named

Cumberland River

from discharge points enumerated herein as serial numbers 001-006 during the effective period of this permit,

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit is a modification of the NPDES permit issued for this facility on December 31, 1978, and replaces that permit in its entirety. This modified permit shall become effective on March 4, 1980.

This modified permit and the authorization to discharge shall expire at midnight, December 31, 1983. Permittee shall not discharge after the above date of expiration without prior authorization. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information, forms, and fees as are required by the Agency authorized to issue NPDES permits no later than 180 days prior to the above date of expiration.

Signed	JAN	1	8	1980

anford W. Harvey

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EP + Parm 3320-4 (10-73)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date of the permit and lasting through expiration, the permittee is authorized to discharge from outfall(s) serial number(s) 001 and 002 - Point source runoff from construction (002 includes treated effluent from concrete mixing plants). Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations	Monitoring Requirements	
	Instantaneous Maximum	Measurement Sample Frequency Type	
Flow-m ³ /Day (MGD)	N/A	1/week	Grab
Total Suspended Solids (mg/1)	1/	1/week	Grab
Turbidity (JTU)	N/A	1/week	Grab
Settleable Solids(m1/1)	N/A	1/week	Grab

1/ Pending repromulgation of effluent guidelines for this waste category, limitations on total suspended solids shall not be applicable. Within 90 days of repromulgation, permittee shall submit a proposed implementation schedule and shall expeditiously complete necessary facilities, if any, to assure compliance with such repromulgated regulations. Where an impoundment is utilized by permittee, it shall be capable of containing a 10-year, 24-hour rainfall event. Not less than 1/six nonths, permittee shall ascertain that available settling volume meets this requirement and shall report this finding when submitting the Discharge Monitoring Report. The first assessment shall be made during the first quarter following the effective date of this permit.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored each time the pond is sampled for suspended solids.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): point(s) of discharge from treatment system prior to mixing with other waste streams.

Note: See Certification Condition 4.a. for more stringent limitation (Instantaneous maximum concentration of settleable solids of 1.0 ml/1).

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date of the permit and lasting through expiration the permittee is authorized to discharge from outfall(s) serial number(s) 003 - Construction Sewage Treatment Plant Effluent

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Other Units	s (mg/l)	Measurement	Sample
	Daily Avg.	Daily Maximum	Frequency	Type
Flow-m ³ /Day (MGD) BOD ₅ Total Suspended Solids Settleable Solids (m1/1) Chlorine Residual Fecal Coliform 1/	N/A	N/A	1/day	Grab
	30	60	*	Grab
	30	60	*	Grab
	1.0	1.0	1/day	Grab
	N/A	N/A	1/day	Grab
(organisms/100 ml)	200	400		Grab

Effluent shall be aerobic at all times.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Sewage treatment plant effluent prior to mixing with any other waste stream.

*Measurement frequency shall be 1/month for installed capacity of 10,000 gpd or less and 1/2 weeks for installed capacity greater than 10,000 gpd.

1/ Geometric mean.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date of the permit and lasting through expiration the permittee is authorized to discharge from outfall(s) serial number(s) 004 - Point Source Runoff from Borrow Area No. 13.

Such discharges shall be limited and monitored by the permittee as specified below:

Parameter	Discharge Li	Monitoring Requirements		
	Daily Average	Daily Maximum	Measurement Frequency	Sample Type
Flow-m ³ /Day (MGD) Total Suspended Solids (mg/1) Turbidity (JTU) Settleable Solids (m1/1)	N/A N/A N/A	N/A N/A N/A	1/week 1/week 1/week 1/week	Grab Grab Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored each time the pond is sampled for suspended solids.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): discharge from effluent settling pond prior to mixing with any other waste stream.

An impoundment will be utilized by permittee and it will be capable of containing a 10-year, 24-hour rainfall event. Not less than 1/six nonths, permittee shall ascertain that available settling volume meets this requirement and shall report this finding when submitting the Discharge Monitoring Report. The first assessment shall be made during the first quarter following the effective date of this permit.

IN0027740

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through expiration the permittee is authorized to discharge from outfall(s) serial number(s) 005 and 006 1/ -Concrete Mixing Plant Settling Pond Effluents to Serial No. 002.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limi	tations	Monitoring Requirements	
	Daily Average	Daily Maximum	Measurement Frequency	Semple Type
Flow-m ³ /Day (MGD) Oil and Grease (mg/l) Total Suspended Solids (mg/l)	N/A N/A N/A	N/A 20 50	1/week 1/month 1/week	Weir reading Grab

Note: See Certification Condition 4.b. for more stringent limitation (Daily average concentration of total suspended solids of 40 mg/1).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): discharge from concrete mixing plant settling ponds prior to mixing with any other waste stream.

1/ Serial numbers assigned for identification and monitoring purposes.

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B. SCHEDULE OF COMPLIANCE

- 1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:
 - a. Compliance with effluent limitations effective date or start of discharge (001, 002, 003, 004, 005, and 006).
 - b. Water Quality Data Report (III.D.)
 - (1) Submit report September 30, 1980
 - c. Preoperational aquatic monitoring program (III.E.)
 - (1) Study plan 30 months prior to Unit 1 fuel loading
 - (2) Implement- 24 months prior to Unit 1 fuel loading
 - (3) First report 15 months after implmentation
 - (4) Subsequent report(s) annually after first report
 - d. Postoperational aquatic monitoring program (III.F.)
 - (1) Study plan six months prior to tommercial operation date of Unit 1.
 - (2) Implement commercial operation date of Unit 1
 - (3) First report 15 months after implementation date
 - (4) Subsequent reports annually after the first report
 - 2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.
 - NOTE: Any construction of new waste treatment facilities or alterations to existing waste treatment facilities will require a permit or authorization for construction in accordance with applicable state law and regulation.

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C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous 3 months shall continue to be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1 or T-40) postmarked no later than the 28th day of the month following the completed reporting period. Reports shall be submitted on*

Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the State at the following addresses:

Water Enforcement Branch
Environmental Protection Agency
Region IV
345 COURTLAND STREET N.E.
ATLANTA GA 30308

Division of Water Quality Control TN Dept. of Public Health 621 Cordell Hull Building Nashville, Tennessee37219

3. Definitions

- a. The "daily average" concentration means the arithmetic average (weighted by flow) of all the daily determinations of concentration made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow) of all the samples collected during that calendar day.
- b. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- c. "Weighted by flow" means the summation of each sample concentration times its respective flow in convenient units divided by the summation of the flow values.
- d. "Nekton" means free swimming aquatic animals whether of freshwater or marine origin.
- e. For the purpose of this permit, a calendar day is defined as any 24-hour period.

*the 28th day of February, May, August, and November.

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4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(g) of the Federal Water Pollution Control Act, As Amended. (Federal Register, October 16, 1973; Title 40, Chapter I, Sub-chapter D, Part 136 "Guidelines Establishing Test Procedures for the Analysis of Pollutants".)

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses.
- d. The analytical techniques or methods used; and
- e. The results of all required analyses

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form (EPA No. 3320-1 or T-40). Such increased frequency shall also be indicated.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Regional Administrator or the State water pollution control agency.

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A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Regional Administrator and the State with the following information, in writing, within five (5) days of becoming aware of such condition:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this possit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to navigable waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall promptly notify the Regional Administrator and the State in writing of each such diversion or bypass.

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6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

 In accordance with the Schedule of Compliance contained in Part I, provide an alternative power source sufficient to operate the wastewater control facilities;

or, if such alternative power source is not in existence, and no date for its implementation appears in Part I,

b. Halt, reduce or otherwise control production and/or all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the head of the State water pollution control agency, the Regional Administrator, and for their authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Regional Administrator and the State water pollution control agency.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public

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inspection at the offices of the State water pollution control agency and the Regional Administrator. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Act.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit;
- Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

5. Toxic Pollutants

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II, A-3) and "Power Failures" (Part II, A-7), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

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PART III

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9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected hereby.

PART III

OTHER REQUIREMENTS

A. In the event that waste streams from various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property attributable to each controlled waste source shall not exceed the specified limitation for that waste source.

B. If the permittee, after monitoring for at least six months, determines that he is consistently meeting the effluent limits contained herein, the permittee may request of the Regional Administrator that the monitoring requirements be reduced to a lesser frequency or be eliminated.

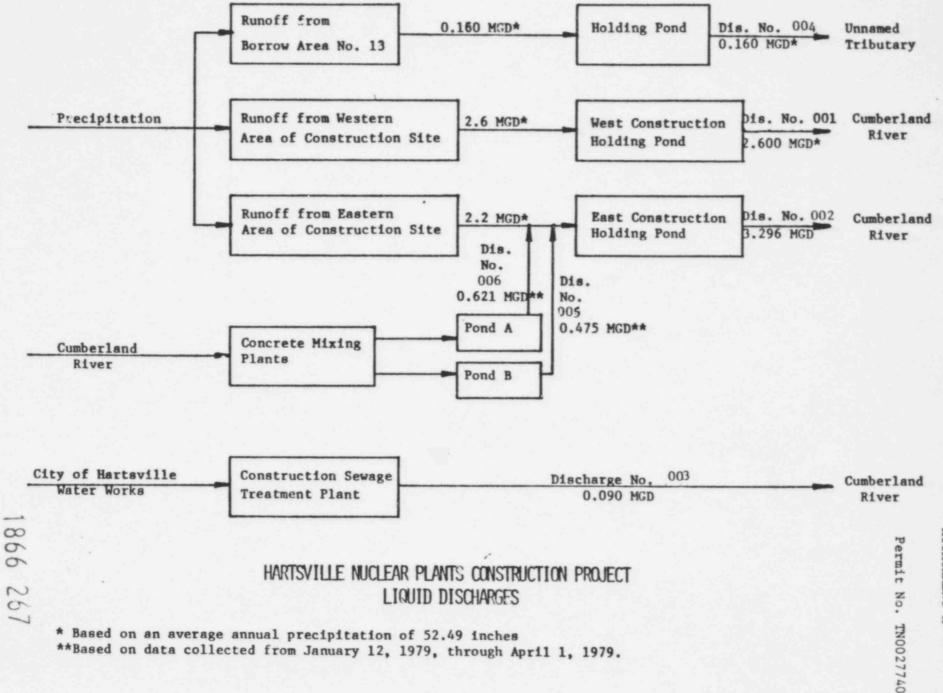
- C. There shall be no discharge of polychlorinated byphenyl compounds such as those commonly used for transformer fluid. Administrative procedures shall be instituted to (1) maintain a detailed inventory of PCB use, (2) assure engineering design and construction to preclude release of PCB's to the environment, and (3) effectively detect the loss of PCB's from equipment. Detail of such procedures shall be submitted no later than 180 days prior to receipt of PCB containing equipment.
- D. Permittee shall continue the ongoing aquatic construction effects monitoring program which includes monitoring of construction discharges and peripheral streams effects by construction runoff as summarized in Part B, "Hartsville Nuclear Plant, NPDES No. TN0027740, Construction Effects Monitoring Program" as submitted December 17, 1979. Part A may be discontinued; however, a report covering such studies shall be submitted by September 30, 1980, to EPA, U.S. NRC and the State of Tennessee.

PART III
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- E. Permittee shall implement an approved preoperational nonradiological aquatic monitoring program to reestablish baseline
 data on water quality and biotic conditions in the Cumberland
 River not less than two years prior to the scheduled date for
 Unit 1 fuel loading. Not less than six months prior to the
 scheduled date for implementation, the permittee shall submit
 to the Regional Administrator for review and approval, a detailed
 monitoring plan. Reports shall be submitted annually, not more
 than three months following completion of the reporting period
 with the first report due 15 months after implementation of
 the program.
- F. Permittee shall implement an approved operational non-radiological aquatic monitoring program by the date of commercial operation of Unit 1. Not less that six months prior to scheduled implementation date, the permittee shall submit to the Regional Administrator for review and approval, a detailed monitoring plan. Reports shall be submitted annually, not more than three months following completion of the reporting period with the first report due 15 months after implemention of the program. The program shall continue for a period of not less than two years after commercial operation of Unit 4.
- G. Not later than December 31, 1979, permittee shall submit a complete application for preoperational and operational wastes from the four-unit Hartsville Nuclear Plant.
- H. This permit shall be modified, or alternatively, revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2) (C), and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

I. The Tennessee Department of Public Health has certified the discharges covered by this permit with conditions (See Attachment B). Section 401 of the Act requires that conditions of certification shall become a condition of the permit. The monitoring and sampling shall be as indicated for those parameters included in the certification. Any effluent limits, and any additional requirements, specified in the attached state certification which are more stringent supersede any less stringent effluent limits provided herein. During any time period in which the more stringent state certification effluent limits are stayed or inoperable, the effluent limits provided herein shall be in effect and fully enforceable.



HARTSVILLE NUCLEAR PLANTS CONSTRUCTION PROJECT LIQUID DISCHARGES

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^{*} Based on an average annual precipitation of 52.49 inches

^{**}Based on data collected from January 12, 1979, through April 1, 1979.

Permit No. TN0027740

RECEIVED EPA/RESIO (V

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DIVISION

November 8, 1979

STATE OF TENNESSEE
DEPARTMENT OF PUBLIC HEALTH

CORDELL HULL BUILDING NASHVILLE, TENNESSEE 37219

Mr. Sanford W. Harvey, Director Enforcement Division, Region IV Environmental Protection Agency 345 Courtland Street Atlanta, Georgia 30308

Re: State Certification

Modification of NPDES Permit No. TN0027740

Hartsville Nuclear Construction

Smith and Trousdale Counties, Tennessee

Receiving waters - Cumberland River in the vicinity of

Mile 285

Dear Mr. Harvey:

The State of Tennessee requests that our previous certification of NPDES Permit No. TN0027740 be incorporated into the modified permit. Attached is a copy of that certification for reference. Part 4a of the Certification refers to Outfall No. 1 and No. 2. This numerical designation for point source runoff from the construction site has been retained in the modified permit. However, Part 4b refers to Outfall No. 003 for the concrete mixing plant settling pond effluent to Outfall No. 001. This designation has not been retained. The modified permit designates this discharge as Outfalls No. 005 and No. 006 concrete mixing plant settling pond to Outfall No. 002. The changes in the numbering of the discharges have been noted on our certification.

Sincerely,

Natalie & Parsone

Natalie G. Ransone Chief, Permits Section Division of Water Quality Control

cc: Charles A. Kaplan, EPA
Mohamed T. El-Ashry, TVA, Norris, TN



STATE OF TENNESSEE DEPARTMENT OF PUBLIC HEALTH

CORDELL HULL BUILDING NASHVILLE, TENNESSEE 37219

621 Cordell Hull Building

December 21, 1978

Mr. Paul J. Traina
Director
Enforcement Division, Region IV
Environmental Protection Agency
345 Courtland Street
Atlanta, Georgia 30308

RE: State Certification
NPDES Permit No. TN0027740
Hartsville Nuclear Construction Project
Smith and Trousdale Counties, Tennessee
Receiving Waters - Cumberland River in the
vicinity of River Mile 285

Dear Mr. Traina:

Pursuant to Section 401 of the Federal Water Pollution Control Act (as amended by the Clean Water Act of 1977), 33 U.S.C. 1251, 1341, the State of Tennessee hereby issues certification to the subject applicant for a National Pollutant Discharge Elimination System (NPDES) Permit for a wastewater discharge.

The State of Tennessee is not aware of any condition or limitation under Section 301. Section 302, or Section 303 of the Federal Act that would be violated by issuance of the proposed NPDES Permit; additionally, the State of Tennessee is not aware of any standard of performance under Section 306 or Section 307 that would be violated by issuance of the proposed Permit.

This certification is contingent upon the following conditions:

- Permittee is in no way relieved from any liability for damages which might result from the discharge of wastewater.
- Permittee must additionally comply with all requirements, conditions, or limitations which may be imposed by any provision of the Tennessee Water Quality Control Act (T.C.A. Sections 70-324 through 70-342) or any regulations promulgated pursuant thereio.

Page 2 Mr. Traina December 21, 1978

- The State of Tennessee reserves the right to modify or revoke this certification or to seek revocation or modification of the NPDES Permit issued subject to this certification should the State determine that the wastewater discharge violates the Tennessee Water Quality Control Act, or any applicable Water Quality Criteria, or any rules or regulations which may be promulgated pursuant to the Clean Water Act of 1977, Public Law 95-217.
- 4. The State of Tennessee requests that the following discharge limitations and monitoring requirements be included in the permit:
- Outfalls No. 001 and No. 002 Runoff from construction site and concrete mixing plant area.

Effluent Characteristic

Discharge Limitations

Instantaneous Maximum

Settleable Solids

1.0 ml/1

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month,

b. Outfall No., 003 Concrete mixing plant settling pond effluent to Outfall No. 001. *

Effluent Characteristic

Discharge Limitation

Daily Average

Total Suspended Solids

40 mg/1

Very truly yours,

Steppen E. Anderson Assistant Director

Division of Water Quality Control

SEA/tah

cc: Dr. narry G. Moore, Jr., TVA

Mr. Joe Rossman, Division of Water Quality Control

*Now Outfalls No. 005 and No. 006 to Outfall No. 002.