

ENVIRONMENTAL DOCUMENT TYPE:  
KIF NPDES Correspondence  
(Water Withdrawal Annual Update)



Tennessee Valley Authority, 714 Swan Pond Road, Harriman, Tennessee 37748

1/22/2008

Tennessee Department of Environment and Conservation  
Division of Water Supply  
Compliance Review Section  
6<sup>th</sup> Floor, L&C Annex  
401 Church Street  
Nashville, Tennessee 37243

Dear Sir or Madam:

TENNESSEE VALLEY AUTHORITY (TVA) – KINGSTON FOSSIL PLANT - NPDES PERMIT  
NUMBER TN0005452 – WATER WITHDRAWAL ANNUAL UPDATE

In accordance with the provisions of Tennessee Code Annotated Section 69-8-301 et seq,  
enclosed are completed Water Withdrawal Registration Forms for calendar year 2007.

As previously reported, federal agencies are not subject to laws and regulations promulgated by  
state governments unless Congress has clearly waived the federal government's sovereign  
immunity. However, TVA has voluntarily agreed as a matter of policy to provide the registration  
information to assist both TVA and TDEC in carrying out their water management  
responsibilities. By voluntarily cooperating with the State of Tennessee in its water  
management programs, TVA does not waive any immunity it may have under the Constitution  
from State regulation and control, nor manifest any position on who may control or own the  
water.

Should you have any questions or need additional information, please contact Cynthia  
McCowan at (865) 717-2180.

Sincerely,

A handwritten signature in black ink that reads "Michael T. Beckham". The signature is written in a cursive style with a long horizontal line extending to the right.

Michael T. Beckham  
Plant Manager  
Kingston Fossil Plant

MTB:cwm

Enclosures

TVA-00025667



DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER SUPPLY  
6<sup>th</sup> Floor L & C Tower, 401 Church Street  
Nashville, Tennessee 37243-1539  
(615) 532-0191

**WATER WITHDRAWAL REGISTRATION**

In accordance with the provisions of Tennessee Code Annotated Section 69-8-301 et seq., the Water Resources Information Act; this registration is required for anyone withdrawing an average of 10,000 gallons or more of water per day.

**See page 3-4 for instructions.**

**PART A. FACILITY & CONTACT INFORMATION**

1. Withdrawal Registration No.: \_\_\_\_\_ (For Official Use Only)
2. Water User: TVA – Kingston Fossil Plant Type: Thermal Plant  
Mailing Address: 1101 Market Street, LP 3K  
City: Chattanooga State: Tennessee Zip: 37402
3. Location (if different from mailing address): Roane County  
Street Address: 714 Swan Pond Road  
City: Harriman State: Tennessee Zip: 37748
4. Number of employees at location: 290
5. Indicate the contact individual for water withdrawal information:  
Name: Cynthia W. McCowan Title: Program Administrator (Environmental)  
e-mail: cowebb@tva.gov Phone: 865-717-2180 Fax: 865-717-2505

**PART B. WATER USE REPORTING PERIOD**

6. Year: 2007 Seasonal Withdrawals (Month/Year): N/A Ending (Month/Year): N/A
7. Water Registration: (Check One):  New Operation  Renewal
8. List any water problems you have experienced in the last reporting period: N/A
9. Number of days ground water (springs and wells) has been withdrawn during the year: 0
10. Number of days surface water (streams) has been withdrawn during the year: 365
11. **Total number of days water has been withdrawn during the year:** 365

12. Classification of Water Use (Use all that Apply) and Percentage of Total use:
- 0 % a) Domestic water use (drinking, human consumption and general sanitation uses)
  - 0 % b) Institutional or other general uses (lawn watering, laundry)
  - 0 % c) Irrigation of crops, pastures and nursery stock
  - 0 % d) livestock watering (includes feed lots, dairy sanitation and fish farming)
  - 0 % e) navigation (lock usage and flow augmentation for navigation)
  - 100 % f) thermoelectric power production, including cooling purposes (excludes hydroelectric)
  - 0 % g) recreational use, park use, golf course irrigation, water park use
  - 0 % h) industrial uses include manufacturing, food processing, washing, and cooling
  - 0 % i) hydroelectric power generation (provided none of it is used consumptively)
  - 0 % j) mining (milling or where water is used to wash or process an ore)
  - 0 % k) dewatering (mining, quarry rock production, other operations where water is withdrawn)
  - 0 % l) any other use not defined above. Describe: \_\_\_\_\_
  - 100 % **Total (Must equal 100%)**

**PART C. WATER WITHDRAWAL INFORMATION** (Attach additional sheets if necessary)

| Year                                                                                                                       | I.D. #                                                                       | Source Name | G, S,P <sup>1</sup>              | County                                                                                                                                                                                                                        | Latitude <sup>2</sup> | Longitude <sup>2</sup> | Method of Measure <sup>3</sup> | Million Gallons Withdrawn |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------------|--------------------------------|---------------------------|
| 2007                                                                                                                       | 001                                                                          | Emory River | S                                | Roane                                                                                                                                                                                                                         | 35-54-00              | 84-30-00               | B                              | 488,067                   |
| 2007                                                                                                                       | 002                                                                          |             |                                  |                                                                                                                                                                                                                               |                       |                        |                                |                           |
| 2007                                                                                                                       | 003                                                                          |             |                                  |                                                                                                                                                                                                                               |                       |                        |                                |                           |
| 13.                                                                                                                        | <b>Total Volume Withdrawn in Million Gallons=</b>                            |             |                                  |                                                                                                                                                                                                                               |                       |                        |                                | <b>488,067</b>            |
| 14.                                                                                                                        | <b>Average Daily Water Withdrawal for year (Line 13 divided by Line 11)=</b> |             |                                  |                                                                                                                                                                                                                               |                       |                        |                                | <b>1337.17</b>            |
| 15.                                                                                                                        | <b>Max. Daily Water Withdrawal (MG):</b>                                     |             | <b>Month of Max. Withdrawal:</b> |                                                                                                                                                                                                                               | Any month             |                        |                                |                           |
| <sup>1</sup> G=Ground water (well or spring);<br>S=Surface water (stream, river, holding pond, lake);<br>P=Purchased water |                                                                              |             |                                  | <sup>3</sup> Method of Measurement Key:<br>A=Flow Meter<br>B=Calculated using pump capacity rating and duration of pumpage<br>C=Capacity of vessel holding water<br>D=Electronic flow measurement<br>E=Other (explain below:) |                       |                        |                                |                           |
| (Check One)                                                                                                                |                                                                              |             |                                  |                                                                                                                                                                                                                               |                       |                        |                                |                           |
| <sup>2</sup> Datum: <input type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83                                        |                                                                              |             |                                  |                                                                                                                                                                                                                               |                       |                        |                                |                           |

**PART D. WATER DISCHARGE** (Attach additional sheets if necessary)

| Year | I.D. #                                                                                   | Discharge Site Name <sup>4</sup>   | River Mile | County | NPDES Permit # | Lat.     | Long.    | Percent of effluent | Million Gallons Returned |
|------|------------------------------------------------------------------------------------------|------------------------------------|------------|--------|----------------|----------|----------|---------------------|--------------------------|
| 2007 | 001                                                                                      | Plant intake canal to Clinch River | 2.9        | Roane  | TN0005452      | 35-54-15 | 84-30-15 | 3.01%               | 14,670                   |
| 2007 | 002                                                                                      | Clinch River                       | 2.9        | Roane  | "              | 35-53-45 | 84-31-15 | 96.99%              | 473,370                  |
| 2007 | 003                                                                                      | Plant intake canal to Clinch River | 2.9        | Roane  | "              | 35-54-00 | 84-30-00 | <0.01%              | 20                       |
| 2007 | 004                                                                                      | Plant intake canal to Clinch River | 2.9        | Roane  | "              | 35-54-00 | 84-30-00 | <0.01%              | 7                        |
| 16.  | <b>Total Volume of Water Returned (Effluent or Discharge) in Million Gallons equals:</b> |                                    |            |        |                |          |          | <b>488,067</b>      |                          |

<sup>4</sup>Examples of discharge sites: stream, well injection, spray, public sewer system, septic tank, field tile

**PART E. SIGNATURE**

I hereby certify that the information provided on this form is true to the best of my knowledge.

16. Print Name: Michael T. Beckham Date: 1/23/08

17. Signature: 

## WATER WITHDRAWAL REGISTRATION

The Tennessee Department of Environment and Conservation (TDEC), Division of Water Supply (DWS) under the Water Resources Information Act of 2002 (T.C.A. §§ 69-7-301 et seq.) maintains a water withdrawal registration in order to better protect the water resources of the State. The registration of water withdrawals applies to all persons withdrawing water from either a surface water or ground water source if the average withdrawal meets or exceeds 10,000 gallons a day for any purpose, except those excluded by the Act. Uses specifically excluded include water used for agriculture, nonrecurring withdrawals of water, and water withdrawn for an emergency use. Also, water purchased from a utility or an industry is not required to be reported. All entities withdrawing water, whether required or excluded by the Water Resources Information Act of 2002, are encouraged to submit an annual Water Withdrawal Registration to the TN Division of Water Supply so that accurate documentation of water use is available for present and future Tennessee water resource studies.

### INSTRUCTIONS:

The registration of a withdrawal is done annually. Data reported should be based on a calendar year and reported by February 15 of the next year. To determine if the volume of water withdrawn meets the requirement of an average withdrawal of 10,000 gallons per day, divide the total amount of water withdrawn (line 13) by the number of days (line 11) that water is withdrawn. A "New Operation" may not have any historical data on which to base its withdrawal data. Estimate or indicate the amount of water anticipated to be withdrawn. If this is a renewal, report the amount withdrawn during the past year in Part C.

### Part A. Facility & Contact Information

1. The Withdrawal Registration No. is assigned by the Division of Water Supply (DWS). Report all annual water withdrawals using your assigned Withdrawal Registration Number. Leave blank for new operations.
- 2 through 5. Complete the facility and main contact information. Select type of water users (**industrial, irrigation, mining, or thermal plant**).

### Part B. Water Use Reporting Period

6. Indicate year, the beginning month/year and the ending month/year if withdrawals are seasonal.
7. Check new or renewal water withdrawal registration.
8. List any water problems encountered during the year (supply, quality, flooding, turbidity).
- 9 to 11. Complete the days water is withdrawn from ground water and/or surface water sources and give a total number of days water is withdrawn (line 11).
12. Indicate the percent of water used for any of the **12 water use classifications** applicable to your company during the year: **a)** domestic water use includes all water withdrawn by utility districts, municipal public water systems, subdivisions, prisons, colleges, and most small commercial establishments where water is used for drinking, human consumption and general sanitation, **b)** institutional or other general uses (lawn watering, laundry), **c)** irrigation of crops and nursery stock, **d)** livestock watering (includes feed lots, dairy sanitation and fish farming) **e)** navigation (lock usage and flow augmentation for navigation), **f)** thermoelectric power production, including cooling purposes (excludes hydroelectric), **g)** recreational use, park use, golf course irrigation, and water park use, **h)** industrial uses include manufacturing processing, washing, and cooling, including food processing, but excluding mining related uses, **i)** hydroelectric power generation (provided none of it is used consumptively), **j)** mining (milling or where water is used to wash or process an ore), **k)** dewatering (mining, quarry rock production, and other operations where water is withdrawn in order to conduct another activity), and **l)** any other use not defined above.  
**Total of lines 12(a) through 12(l) must equal 100.**

### Part C. Water Withdrawal Information

Identify the source point and quantity of water withdrawn from each source point.  
If water is purchased, give the name of the municipality or utility district.  
Indicate ID number, source name commonly used by withdrawer to refer to the source, e.g., Smith Spring, Big Creek intake, Collier Road Well. Withdrawals made from multiple wells that are measured at an entry point may be reported as a single figure and described as a well field, e.g., Thomson Well Field. If there are several source points, each metered separately, please report the withdrawal of each source point.  
Indicate if water is from Ground, Surface, or Purchased source.

Enter the County, River Mile (if applicable), Latitude and Longitude for each source point. It is important that **location information** be as accurate as possible. A GPS unit may be used to give the latitude and longitude in decimal format. If you do not know the latitude and longitude of the intake, use river mile or attach a topographic map with the withdrawal point location(s) marked with a ● and label the mark according to Well, Stream or Spring ID used in this registration. Mark discharge point(s) with an X. Latitude longitude may be expressed in degrees, minutes and seconds or in decimal degrees. All USGS topographic maps are set up in degrees, minutes and seconds. USGS maps are referenced to either the North American Datum of 1927 (NAD 27) or 1983 (NAD 83). Most USGS maps are prepared in NAD 27. Newer maps are based on NAD 83. NAD information is listed in the lower left hand corner of the 7.5 minute U.S. Geological Survey topographic map. Check the appropriate NAD datum.

Use the **Method of Measurement Key (A, B, C, D, E)** to indicate how the volume of water withdrawn is determined (A=flow meter, B=calculated using pump capacity and duration, C=capacity of vessel, D=electronic flow measurement, or E=other). If you select E, explain method of measurement.

13. Add all of the water withdrawals together and give the total volume withdrawn in million gallons.
14. Divide the total volume of water withdrawn (**line 13**) by the total number of days water was withdrawn (**Line 11**). This is the average water withdrawal in million gallons per day. The figure should be fairly large. For example, 2,600,000 gallons would be expressed as "2.6 MG."
15. Enter the maximum daily water withdrawal made during the year in million gallons and enter the month in which the withdrawal was made (e.g., August).

#### **Part D. Water Discharge**

It is very important to indicate the **point(s) of return and total discharge**. The return information is extremely helpful in identifying potential conflicts. Report water that is discharged to a stream, lake, well, spray, public sewer system, septic tank, field tile. Do not report water that is consumed in an operation e.g., irrigation of a golf course.

Indicate discharge ID number and discharge site name. As in water withdrawals, discharge points in close proximity may be identified as a discharge field. If there are several discharge points, each metered separately, please report the volume of each discharge point individually.

Enter the River Mile, County, NPDS permit #, Latitude, Longitude, percent of effluent, and volume returned at each discharge site (million gallons).

16. Add all of the discharge volumes together to get the total volume of discharged water in million gallons. Total volume discharged (in million gallons) may be based on a measured point of return or estimated.

#### **Part E. Signature**

17. Print name and date.
18. Sign and mail the Water Registration to:

**Division of Water Supply  
TN Department of Environment and Conservation  
6<sup>th</sup> Floor L&C Tower, 401 Church St.  
Nashville, TN 37243-1549**

**Water Withdrawal Registration Forms are due to the Division of Water Supply by February 15, 2008.**

**For assistance in completing Water Withdrawal Registration, contact:**

Wayne Muirhead  
Environmental Specialist  
615-253-4067 FAX:615-532-0503  
[wayne.muirhead@state.tn.us](mailto:wayne.muirhead@state.tn.us)