



1101 Market Street, BR 2C, Chattanooga, Tennessee 37402

March 30, 2021

Mr. Lee Barber (Lee.2.Barber@tn.gov)  
Natural Resources Section  
Tennessee Department of Environment  
and Conservation (TDEC)  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 11th Floor  
Nashville, Tennessee 37243

Dear Mr. Barber:

**TENNESSEE VALLEY AUTHORITY (TVA) – KINGSTON FOSSIL PLANT (KIF) –  
APPLICATION FOR GENERAL AQUATIC RESOURCE ALTERATION PERMIT (ARAP) –  
MINOR WATER WITHDRAWALS**

Enclosed is an ARAP application for minor water withdrawals at KIF. The enclosure includes the required project information along with a topographic map and check in the amount of \$500 to cover application processing.

TVA operates a temporary pump to withdraw water from the Watts Bar Reservoir for the primary purposes of filling a water truck used to control fugitive dust emissions from on-going construction projects and operations at the site. We believe described water withdrawals qualify for coverage under the General ARAP for Minor Water Withdrawals.

If you have questions or need additional information, please contact Brad Love at (423) 751-8518 or by email at [bmlove@tva.gov](mailto:bmlove@tva.gov).

Sincerely,

A handwritten signature in cursive script that reads "Paul Pearman".

Paul Pearman  
Senior Manager  
Water Permits, Compliance, and Monitoring

Enclosures

Mr. Lee Barber  
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Enclosures

cc (Electronic Distribution w/ Enclosures):

Ms. Angela Adams  
Coal Combustion Residual  
Environmental Consultant  
Tennessee Department of Environment and  
Conservation  
Division of Water Resources 761  
Emory Valley Road  
Oak Ridge, Tennessee 37830

Mr. Rob Burnette  
Solid Waste Program Manager  
Tennessee Department of Environment  
and Conservation  
1301 Riverfront Parkway, Suite 206  
Chattanooga, Tennessee 37402

Mr. James Clark  
Chief Geologist  
Tennessee Department of Environment  
and Conservation  
Columbia Field Office  
1421 Hampshire Road  
Columbia, Tennessee 38401

Mr. Britton Dotson  
Environmental Fellow  
Tennessee Department of Environment  
and Conservation  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 11th Floor  
Nashville, Tennessee 37243-1548

Mr. Pat Flood  
Senior Advisor for Technical Assistance  
and Special Projects within the Bureau  
of Environment  
Tennessee Department of Environment  
and Conservation  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 11th Floor  
Nashville, Tennessee 7243-1548

Mr. Caleb Nelson  
Tennessee Department of Environment and  
Conservation  
Columbia Field Office  
1421 Hampshire Road  
Columbia, Tennessee 38401

Mr. Jim Ozment  
Coal Combustion Residual  
Environmental Consultant  
Tennessee Department of Environment and  
Conservation  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 2nd Floor  
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Ms. Beth Rowan  
Environmental Consultant  
Tennessee Division of Remediation William  
R. Snodgrass Tennessee Tower 312 Rosa  
L. Parks Avenue, 11th F  
Nashville, Tennessee 37243-1548

Mr. Robert S. Wilkinson  
Coal Combustion Residual Technical Manager  
Tennessee Department of Environment  
and Conservation  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 2nd Floor  
Nashville, Tennessee 37243-1548



**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
Division of Water Resources  
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor,  
Nashville, Tennessee, 37243  
1-888-891-8332 (TDEC)

**Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification**

<b>OFFICIAL STATE USE ONLY</b>	Site #:	Permit #:	
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**Section 1. Applicant Information** (individual responsible for site, signs certification below)

Applicant Name (company or individual): <b>Tennessee Valley Authority</b>	SOS #:	Status: <b>N/A</b>
Primary Contact/Signatory: <b>M. Scott Turnbow</b>	Signatory's Title or Position: <b>Vice President, Civil Projects</b>	
Mailing Address: <b>1101 Market Street, LP 5D-C</b>	City: <b>Chattanooga</b>	State: <b>TN</b> Zip: <b>37402</b>
Phone: <b>423-751-3031</b>	Fax:	E-mail: <b>msturnbow@tva.gov</b>

**Section 2. Alternate Contact/Consultant Information** (a consultant is not required)

Alternate Contact Name: <b>Brad Love</b>		
Company: <b>Tennessee Valley Authority</b>	Title or Position: <b>Water Permitting Specialist</b>	
Mailing Address: <b>1101 Market Street, BR 2C-C</b>	City: <b>Chattanooga</b>	State: <b>TN</b> Zip: <b>37402</b>
Phone: <b>423-751-8518</b>	Fax:	E-mail: <b>bmlove@tva.gov</b>

**Section 3. Fee** (application will be incomplete until fee is received)

☐ No Fee      ☒ Fee Submitted with Application      Amount Submitted: \$ 500

Current application fee schedules can be found at the Division of Water Resources webpage at:  
<https://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-.html>  
or by calling (615) 532-0625. Please make checks payable to "Treasurer, State of Tennessee".

Billing Contact (if different from Applicant):      Name: **Sharon Figgures**      Email: **sdmclin@tva.gov**  
Address: **1101 Market Street, BR 2C-C**      Phone: **423-751-7235**

**Section 4. Project Details** (fill in information and check appropriate boxes)

Site or Project Name: <b>Kingston Projects Minor Water Withdrawal</b>	Nearest City, Town or Major Landmark: <b>Kingston, TN</b>	
Street Address or Location (include zip): <b>714 Swan Pond Road, Harriman, TN 37748</b>		
County(ies): <b>Roane</b>	MS4 Jurisdiction:	Latitude (dd.ddd): <b>35.8938</b>
		Longitude (dd.ddd): <b>-84.5222</b>
Resources Proposed for Alteration: <input type="checkbox"/> Stream / River <input type="checkbox"/> Wetland <input checked="" type="checkbox"/> Reservoir		
Name of Water Resource (for more information, access <a href="http://tdeconline.tn.gov/dwr">http://tdeconline.tn.gov/dwr</a> ): <b>Watts Bar Reservoir</b>		
Brief Project Description (a more detailed description is required under Section 8): <div style="text-align: right;">Minor water withdrawal to support on going projects at KIF</div>		
<p>Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency?      <input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p>If Yes, provide the permit reference numbers:</p> <p>Will the activity require a 401 Water Quality Certification:      <input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p>If Yes, attach any 401 WQC pre-filing meeting request documentation</p> <p>Is the proposed activity associated with a larger common plan of development:      <input type="checkbox"/> Yes      <input checked="" type="checkbox"/> No</p> <p>If Yes, submit site plans and identify the location and overall scope of the common plan of development.</p> <p>Plans attached?      <input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>If applicable, indicate any other federal, state, or local permits that are associated with the overall project site (common plan of development) that have been obtained in the past (e.g., construction general permit and/or other ARAP):</p>		

## Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

<b>Section 5. Project Schedule</b> (fill in information and check appropriate boxes)		
Proposed start date: N/A	Estimated end date: N/A	
Is any portion of the activity complete now?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
If yes, describe the extent of the completed portion: N/A		

**The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable.**

Section 6. Description	Attached Yes No	
6.1 A narrative description of the scope of the project	<input type="checkbox"/>	<input type="checkbox"/>
6.2 USGS topographic map indicating the exact location of the project (can be a photographic copy)	<input type="checkbox"/>	<input type="checkbox"/>
6.3 Photographs of the resource(s) proposed for alteration with location description (photo locations should be noted on map)	<input type="checkbox"/>	<input type="checkbox"/>
6.4 A narrative description of the <b>existing</b> stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.5 A narrative description of the <b>proposed</b> stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input type="checkbox"/>	<input type="checkbox"/>
6.6 In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	<input type="checkbox"/>	<input type="checkbox"/>
6.7 A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	<input type="checkbox"/>	<input type="checkbox"/>

Section 7. Project Rationale	Attached Yes No	
Describe the need for the proposed activity, including, but not limited to the purpose, alternatives considered and rationale for selection of least impactful alternative, and what will be done to avoid or minimize impacts to water resources	<input type="checkbox"/>	<input type="checkbox"/>

Section 8. Technical Information	Attached Yes No	
8.1 Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5 x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions (e.g., stream cross sections where road crossings are proposed)	<input type="checkbox"/>	<input type="checkbox"/>
8.2 For the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods and any proposed monitoring	<input type="checkbox"/>	<input type="checkbox"/>
8.3 Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations and any other measures to treat, control, or manage impacts to waters	<input type="checkbox"/>	<input type="checkbox"/>

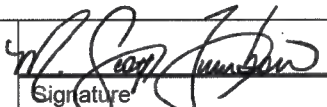
<b>Section 9. Water Resources Degradation</b> (degree of proposed impact)
<p>Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than <i>de minimis</i> degradation to water quality.</p> <p>Please provide your basis for concluding the proposed activity will cause one of the following levels of water quality degradation:</p> <p><input type="checkbox"/> a. <i>De minimis</i> degradation, no appreciable permanent loss of resource values</p> <p><input type="checkbox"/> b. Greater than <i>de minimis</i> degradation (if greater than <i>de minimis</i> complete Sections 10-11)</p> <p>For information and guidance on the definition of <i>de minimis</i> and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule:  <a href="https://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm">https://publications.tnsosfiles.com/rules/0400/0400-40/0400-40.htm</a></p> <p>For more information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at:  <a href="https://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-.html">https://www.tn.gov/environment/permit-permits/water-permits/1/aquatic-resource-alteration-permit--arap-.html</a></p>



## Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

Section 10. Detailed Alternatives Analysis		Attached Yes No	
10.1	Analyze all reasonable alternatives and describe the level of degradation and permanent loss of resource value caused by each alternative. Assessment must consider options other than the "Preferred" and "No Action" alternatives. Provide associated rationale for selecting or rejecting all alternatives considered and demonstration that the least impactful practicable alternative was selected.	<input type="checkbox"/>	<input type="checkbox"/>
10.2	Discuss the social and economic consequences of each alternative	<input type="checkbox"/>	<input type="checkbox"/>
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	<input type="checkbox"/>	<input type="checkbox"/>

Section 11. Compensatory Mitigation		Attached Yes No	
11.1	A detailed discussion of the proposed compensatory mitigation. Provide evidence of credit reservation if proposing to utilize a third-party provider.	<input type="checkbox"/>	<input type="checkbox"/>
11.2	Analysis of any proposed appreciable loss of resource value using the TN Stream Mitigation Guidelines. Provide Stream Quantification Tool (SQT) results if applicable. Include Existing Condition Score (ECS) and debit/credit calculations.	<input type="checkbox"/>	<input type="checkbox"/>
11.3	Describe how the compensatory mitigation would result in no net loss of resource value	<input type="checkbox"/>	<input type="checkbox"/>
11.4	Provide a detailed monitoring plan for the compensatory mitigation site if permittee-responsible project is proposed	<input type="checkbox"/>	<input type="checkbox"/>
11.5	Describe the long-term protection measures for the compensatory mitigation site if permittee-responsible project is proposed (e.g., deed restrictions, conservation easement)	<input type="checkbox"/>	<input type="checkbox"/>

Certification and Signature			
<p>An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.</p> <p><b><i>I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.</i></b></p>			
<b>M. Scott Turnbow</b> <hr/> Printed Name	<b>Vice President</b> <hr/> Official Title	 <hr/> Signature	<b>03/29/2021</b> <hr/> Date

Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the proposed activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments to [water.permits@tn.gov](mailto:water.permits@tn.gov).

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy., Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



**Tennessee Valley Authority  
Kingston Fossil Plant  
Projects/Operations Support Minor Water Withdrawal**

**Section 6.1**

TVA operates a pump for minor water withdrawals from the Watts Bar Reservoir to support on-going plant operations and various projects at the site. The primary use of water withdrawals are to fill a water truck used to control fugitive dust emissions from on-going construction projects and operations at the site. Withdrawals are also used water vegetation planted to stabilize disturbed soils. Withdrawal flow rates measure approximately 1,400 gallons per minute.

**Sections 6.2**

Please see attached topographic maps of the withdrawal location.

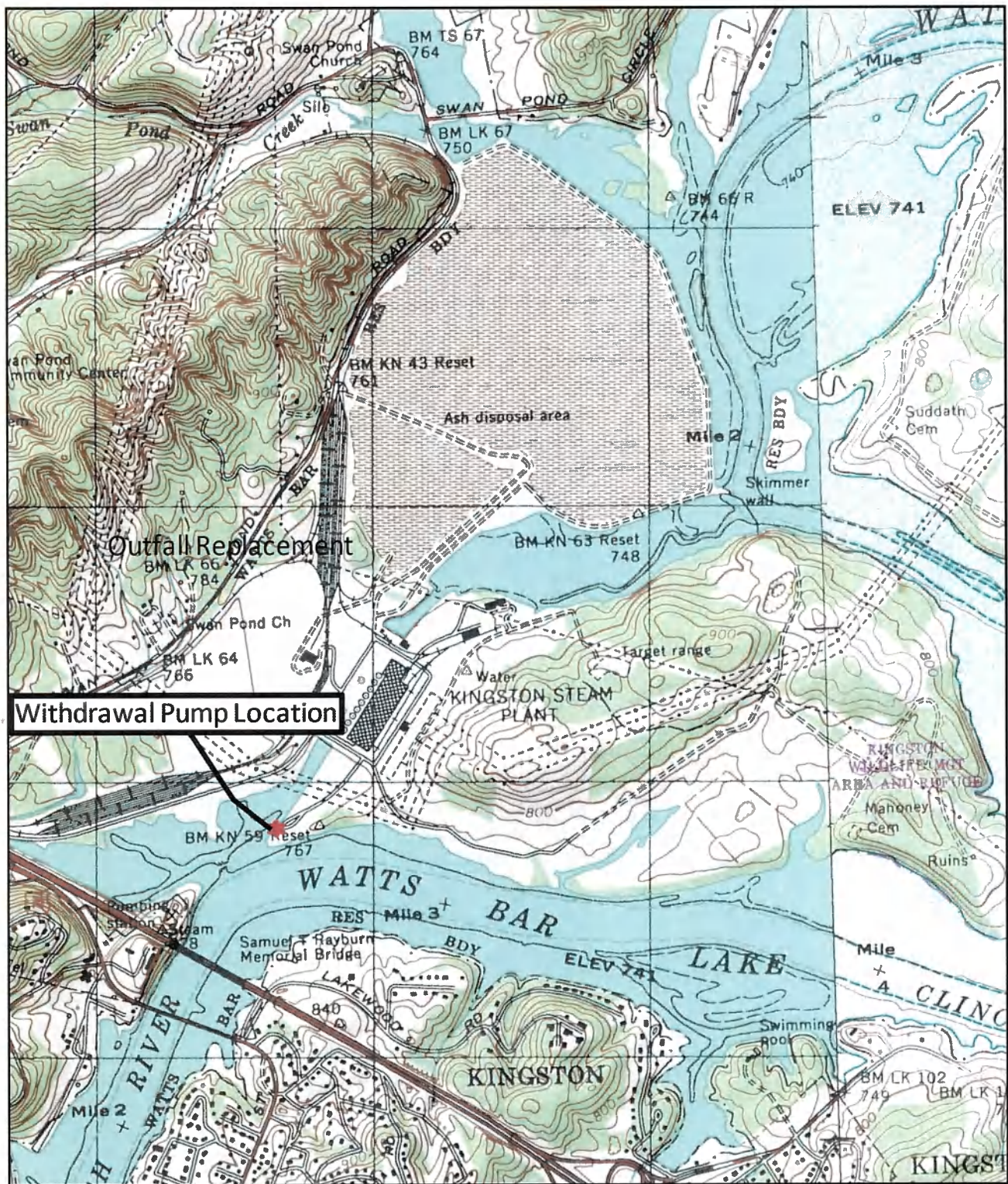
**Section 6.4**

The minor water withdrawal pump at KIF draws from the Watts Bar Reservoir, which has over 39,090 acres of water surface area. TVA's reservoir operations staff calculated the 7Q10 flow rate near the withdrawal location based on Melton Hill Dam releases and the Emory River at Oakdale gauge, using data from years 2004-2020. The calculated 7Q10 is 650 cubic feet per second.

**Section 7.0**

TVA operates the minor water withdrawal pump for the primary purpose of controlling fugitive dust emissions from on-going construction projects and operations at the site. Impacts are minimized by tethering the pump intake to a buoy adjacent to the reservoir bank, which does not require any construction activities or disturbance along the bank to deploy. TVA tracks water withdrawals and submits annual totals with the Kingston Fossil Plant Water Withdrawal Registration.





Tennessee Valley Authority  
Kingston Fossil Plant  
Projects/Operations Support Minor Water Withdrawal  
ARAP Topo Map

United States Treasury 15-51  
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TENNESSEE VALLEY  
AUTHORITY  
KNOXVILLE, TN

4912 - 80320544

Check No.



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the order of

03/18/21

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TREASURER STATE OF TN  
TN DEPT ENV & CONSERVATION  
WRS TN TOWER FL 10  
312 ROSA L PARKS AVE  
NASHVILLE TN 37243  
UNITED STATES

VOID AFTER ONE YEAR

TENNESSEE VALLEY AUTHORITY  
T *James W. Wilson* T  
V V  
A DISBURSING OFFICER A