




Department of
**Environment &
Conservation**

Data Centers & Industrial Reuse

A Memphis Story...

Overview

- State Operating Permit: SOP-24025
- Permittee: CTC Property LLC
- First of its kind in TN
- New non-potable reuse regs introduced in 2022
- Rule 0400-40-06-.10



State of Tennessee Operating Permit
Permit Number SOP-24025

Issued by
State of Tennessee
Department of Environment and Conservation
Division of Water Resources
Davy Crockett Tower, 9th Floor
500 James Robertson Parkway
Nashville, Tennessee 37243

In accordance with the provisions of Tennessee Code Annotated Section 569-3-108 and regulations promulgated pursuant thereto, permission is hereby granted to:

Permittee: CTC Property LLC
Colossus Water Recycling Plant (CWRP)

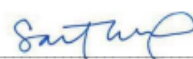
for the operation of: a treated wastewater reuse system

from a facility located at: 3644 Riverport Rd, Memphis, Shelby County, Tennessee

This permit shall become effective on: February 1, 2026

This permit shall expire on: January 31, 2031

Issuance date: January 26, 2026


for April Grippo
Director

Scope of Activity

- Treatment & Distribution System for Non-potable reuse
- Will acquire treated municipal effluent from Memphis (T.E. Maxson Wastewater Treatment)
- Treat the effluent further for “restricted urban reuse”

“Restricted urban reuse” means the non-potable reuse of reclaimed wastewater in municipal or suburban settings that is of such quality that public access is controlled or restricted by physical or institutional barriers, such as fencing, advisory signage, or temporal access restrictions.
- CTC Property will distribute treated water to 2 industries for use as cooling water (originally 3)
 - xAI
 - TVA Allen Combined Cycle Power Plant
- Residual wastewater & excess reuse water will be returned to T.E. Maxson

Permit Conditions

Narrative

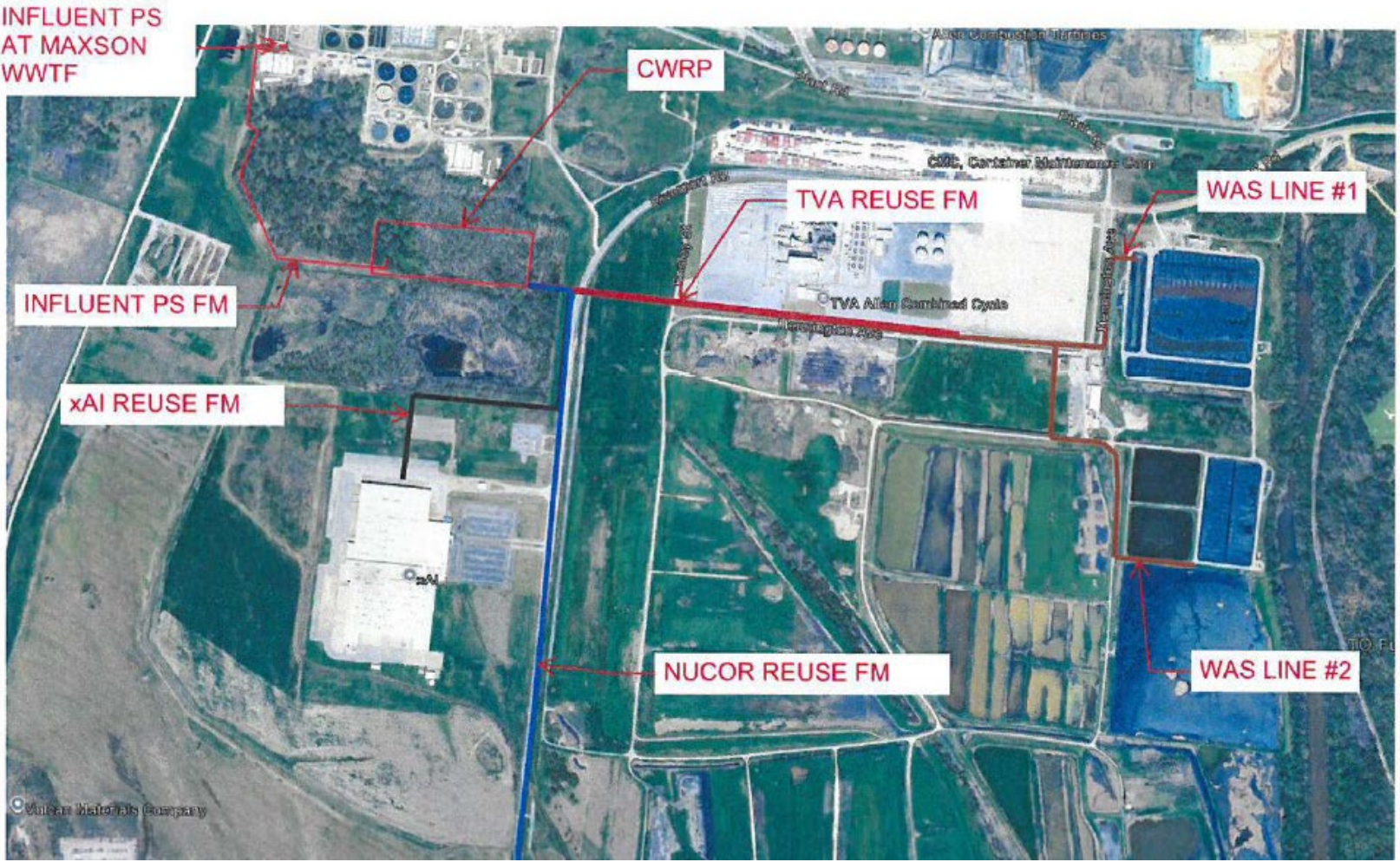
- Contract with Memphis
- Reclaimed Water Management Plan (RWMP)
- End User Agreements
- Cross Connection Control
- Grade IV Wastewater Operator

Numeric

- pH
- CBOD₅ or NH₃-N
- NTU or TSS
- E. coli*
- TRC

EFFLUENT LIMITATIONS AND MONTITORING REQUIREMENTS				
LIMITS				SAMPLING NOTES
Restricted Urban Reuse				
Parameter	Daily Limit	Sample Type	Monitoring Frequency ¹	
pH	6.0 - 9.0	Continuous or Grab	Weekly ²	<p>¹Weekly minimum may be increased in the permit for cause or by parties to an end user agreement.</p> <p>²At a minimum, these parameters shall be sampled, measured, and reported at the CWRP pumping station at the specified frequency unless noted otherwise. More stringent requirements may be included in End-User Agreements.</p> <p>³The Chlorine residual applies as a limit only upon failure to comply with the E. coli limits more than 10% of the time for the previous month after the CWRP start up is meeting delivery standards for use.</p> <p>⁴Within seven days of turbidity exceeding 30 NTU for any period of time, the permittee shall conduct and report a TSS result. Only one TSS test is required in any seven-day period.</p>
CBOD ₅ or NH ₃ -N	30 mg/L CBOD ₅ or 10 mg/L NH ₃ -N	Continuous or Grab	Weekly ²	
NTU or TSS	30 NTU ⁴ or 30 mg/L TSS	Continuous or Grab	Weekly ²	
E. coli	200 cfu/100 mL	Grab	Weekly ^{2,3}	
Chlorine Residual	Minimum of 1 mg/L	Continuous or Grab	Weekly ^{2,3}	
Influent Flow to the CWRP	Report Daily Average, MGD	Calculated	Weekly ²	
Effluent Flow, Each End User and the CWRP	Report Daily Average, MGD	Calculated	Weekly ²	

Site Map



Source: CTC Property Application

Benefits of Permit (from a water perspective)

- Will divert some Memphis municipal effluent away from Mississippi River
- Industries currently use potable water provided by Memphis Light, Gas, and Water (MLGW) – pulled from Memphis Sand Aquifer
- **Reduce withdrawal of water from Aquifer by up to 13 MGD**



Memphis Sand Aquifer

Image Source: Protect Our Aquifer

- > 7,000 sq. miles & > 3,000 ft. depth
- Across parts of 8 states
- City of Memphis relies 100% of Memphis Aquifer for drinking water
- Completely underground resource; relies entirely on groundwater recharge

Benefits of Permit (from a water perspective)

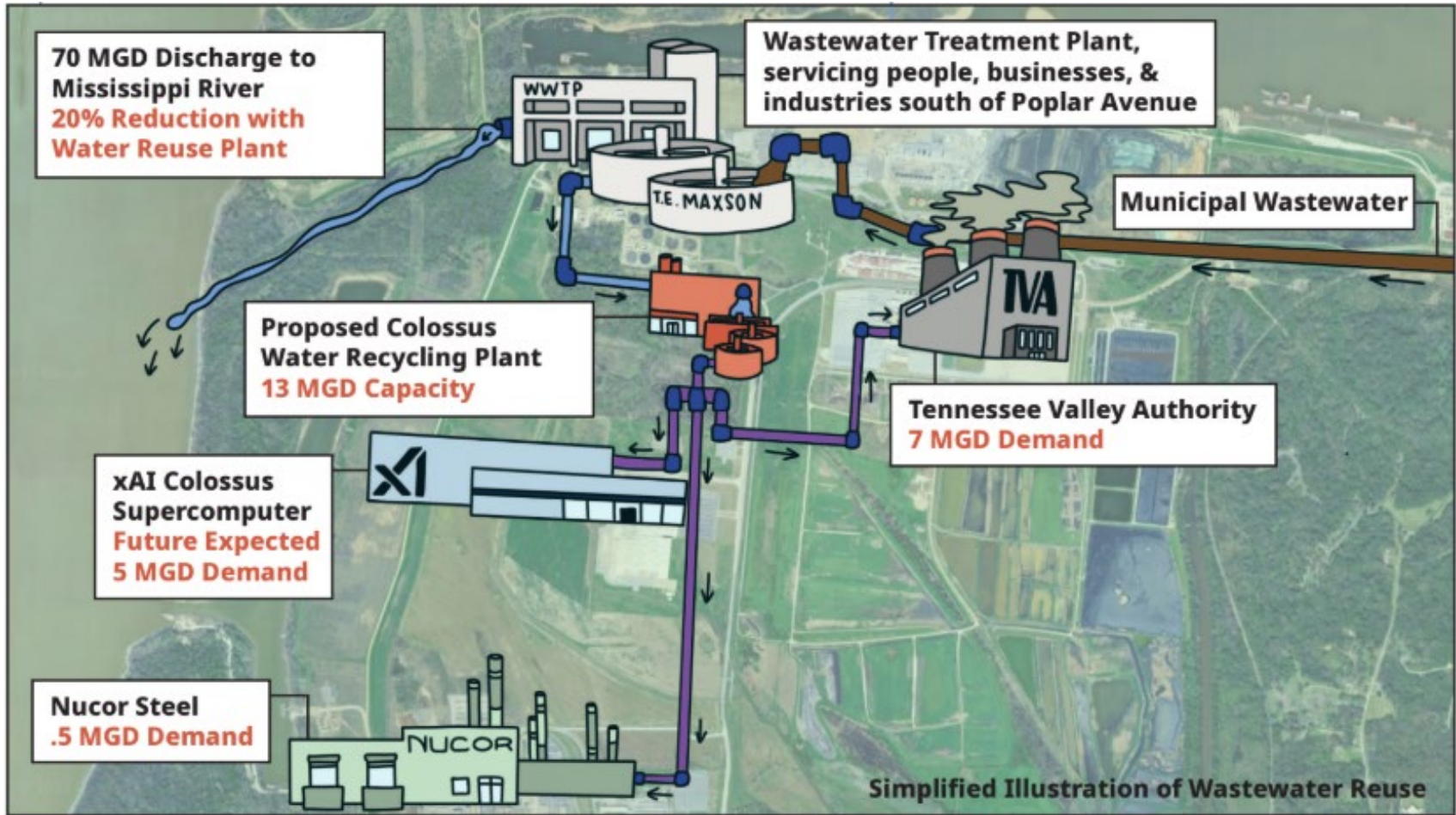


Image Source: Protect Our Aquifer

Barriers to permit

- Large public outcry of environmental justice concerns
- Confusion about environmental impact of our permit
 - Some messaging intentionally implied that this permit would allow *more* water pulled from Aquifer; was difficult to correct that assumption
 - Anger over air permitting decisions (by Shelby County) of xAI facility
- Conflation between one of the recipients of reuse water and the permit action/reuse activity
- ~20 requests for a public hearing
 - One in-person
 - One virtual
- 50+ comments on the draft permit
- Lack of transparency (not NPDES, so no NetDMR reporting)
 - Ultimately required monthly reporting form for our public dataviewer

Permit issued

- In the end, permit was issued on January 26, 2026
- One of the more exciting recent environmental projects in TN



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