



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower  
312 Rosa L. Parks Avenue, 11<sup>th</sup> Floor  
Nashville, Tennessee 37243-1102

September 2, 2016

Mr. Johnny Townsend, Water Superintendent  
City of Camden  
e-copy: jrtownsend1@bellsouth.net  
PO Box 779  
Camden, TN 38320

**Re: State Operating Permit No. SOP-15022  
Camden STP  
Camden, Benton County, Tennessee**

Dear Mr. Townsend:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Resources hereby issues the enclosed State Operating Permit. The continuance and/or reissuance of this Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the technical secretary of the Water Resources Board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit. A copy of the filing should also be sent to TDEC's Office of General Counsel.

If you have questions, please contact the Jackson Environmental Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Hari Akunuri at (615) 532-0650 or by E-mail at [Hari.Akunuri@tn.gov](mailto:Hari.Akunuri@tn.gov).

Sincerely,

Brad C. Harris, P.E.  
Manager, Land-based Systems

Enclosure

cc/ec: Land-based Systems File  
Jackson Environmental Field Office  
Mr. John Beasley, Certified WW Plant Operator, City of Camden, [johnwbeasley@bellsouth.net](mailto:johnwbeasley@bellsouth.net)  
Ms. Linda Sullivan, President, CIA, Civil Infrastructure Associates, LLC, [lsullivan@cia-engineers.com](mailto:lsullivan@cia-engineers.com)  
Mr. Randy Anglin, EPS4, TDEC Division of Water Resources, [Randy.Anglin@tn.gov](mailto:Randy.Anglin@tn.gov)

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William R. Snodgrass - Tennessee Tower  
312 Rosa L. Parks Avenue, 11th Floor  
Nashville, Tennessee 37243-1102

**Permit No. SOP-15022**

**PERMIT**  
**For the operation of Wastewater Treatment Facilities**

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In accordance with the provision of Tennessee Code Annotated section 69-3-108 and Regulations promulgated pursuant thereto:

**PERMISSION IS HEREBY GRANTED TO**

Camden STP  
Camden, Benton County, Tennessee

**FOR THE OPERATION OF**

Collection system, 2-cell, partial mix lagoon, and storage lake located at latitude 36.0475 and longitude -88.074722 and limited access spray irrigation system on 300± acres (Map 64, Parcels 11.00 and 14.00 (Cole and Patterson properties) in Benton County, Tennessee to serve the City of Camden. The design capacity of the biological treatment system is 0.5 MGD, and the spray irrigation disposal capacity is 1.5 MGD.

This permit is issued as a result of the application filed on November 6, 2015, and subsequent division approval on August 11, 2016, of construction documents, revised March 14, 2016, including Addendum No. 1 to Prospective Bidders dated April 25, 2016, via tracking numbers WPN 16-0027 and State Revolving Fund 2014-336 in the offices of the Tennessee Division of Water Resources.

**This permit shall become effective on:      September 01, 2016**

**This permit shall expire on:                      August 31, 2021**

**Issuance date:    August 31, 2016**



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for Tisha Calabrese Benton  
Director

A. GENERAL REQUIREMENTS

The treatment system shall be monitored at Outfall 01A (after storage lake) by the permittee as specified below:

<u>Parameter</u>	<u>Qualifier</u>	<u>Value</u>	<u>Unit</u>	<u>Sample Type</u>	<u>Frequency</u>	<u>Statistical Base</u>
BOD, 5-day, 20 C	<=	45	mg/L	Grab	Monthly	Monthly Average
E. coli	<=	941	#/100mL	Grab	Monthly	Daily Maximum
Flow	Report	-	Mgal/d	Continuous	Daily	Monthly Average
Flow	Report	-	Mgal/d	Continuous	Daily	Daily Maximum
Nitrogen, Ammonia total (as N)	<=	Report	mg/L	Grab	Monthly	Daily Maximum

Sanitary sewer collection system **overflows** and **bypasses** of treatment are prohibited. Incidences of overflows and bypasses, including locations, estimated volumes in gallons or millions of gallons, and duration of each event in hours must be reported on the monthly operating report only at such time the NPDES Permit # TN0064611 is terminated, expired without being administratively continued, or the overflow/bypass language in that permit is either stayed or rendered ineffective.

Operation of the treatment plant and spray irrigation disposal are also subject to the following terms and conditions:

Sampling requirements in the table above apply to effluent being discharged to the spray irrigation plots.

This permit allows the operation of a wastewater spray irrigation system. There shall be no discharge of wastewater to any surface stream or any location where it is likely to enter surface waters. There shall be no discharge of wastewater to any open throat sinkhole. In addition, the spray irrigation system shall be operated in a manner preventing the creation of a health hazard or a nuisance.

Instances of ponding or pooling within the spray dispersal area not associated with a recent rainfall event shall be promptly investigated and noted on the Monthly Operations Report. The report shall include details regarding location(s), determined cause(s), the actions taken to eliminate the ponding, and the date the corrective actions were made. Ponding resulting in the discharge of treated wastewater into the Waters of the State or to locations where it is likely to move to Waters of the State shall be considered a violation of your State Operating Permit.

All vehicular accessible points to the spray fields from public roads or other public access points shall be fenced sufficiently to prevent or impede unauthorized entry as well as to protect the facility from vandalism. Fencing shall be a minimum of four feet in height. Fencing shall be constructed of durable materials. Gates shall be designed and constructed in a manner to prevent or impede unauthorized entry. All designs are subject to division approval. Fencing shall be installed prior to beginning of operation. The permittee shall immediately seek to identify other access points and seek to secure them as soon as signs of unauthorized entry present on the spray areas.

All spray nozzles shall be configured to provide optimum utilization of all approved spray fields.

All new facilities must maintain a minimum 30 day storage capacity for surface spray irrigation systems.

The site shall be inspected by the certified operator or his/her designee, at a minimum, once per fourteen days (default) OR in accordance with an operating and maintenance inspection schedule in the permit administrative file record. The default inspection frequency will apply if an operating and maintenance inspection schedule is not submitted to be a part of the permit administrative file record. The operating and maintenance inspection schedule shall at a minimum evaluate the following via onsite visits or telemetry monitoring or a combination of the two:

- the condition of the treatment facility security controls (doors, fencing, gates, etc.),
- the condition of the spray area security controls (doors, fencing, gates, etc.),
- the condition of the site signage,
- the operational status of the mechanical parts of the treatment system (pumps, filters, telemetry equipment, etc.)
- the condition of the UV bulbs (if applicable)

Submission of the schedule, or revisions to the schedule, may be submitted to the division electronically. The schedule shall be submitted on or before the effective date of the permit. The permittee is responsible for maintaining evidence that the schedule, or revisions, have been submitted to the division.

## **B. MONITORING PROCEDURES**

### 1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Effluent to spray irrigation plots.

### 2. Test Procedures

Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Rule 0400-40-05-.07.

## **C. DEFINITIONS**

The "daily maximum concentration" is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day.

The "**monthly average concentration**", other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "grab sample" is a single influent or effluent sample collected at a particular time.

For the purpose of this permit, "*continuous monitoring*" means collection of samples using a probe and a recorder with at least one data point per dosing cycle.

A "quarter" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

## **D. REPORTING**

### 1. Monitoring Results

Monitoring results shall be recorded monthly OR in accordance with the operating and maintenance inspection schedule in the permit administrative file record and submitted monthly. The monthly report shall detail the following:

Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A copy should be retained for the permittee's files. Operation reports and any communication regarding compliance with the conditions of this permit must be sent to:

Division of Water Resources  
Jackson Environmental Field Office  
1625 Hollywood Drive  
Jackson, TN 38305

The first operation report is due on the 15<sup>th</sup> of the month following the month containing the permit effective date.

## 2. 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 in 0400-40-05-.07(2)(h)2, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monthly Operation Report. Such increased frequency shall also be indicated.

## 3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 69-3-115 of the Tennessee Water Quality Control Act.

## 4. Signatory Requirement

All reports or information submitted to the commissioner shall be signed and certified by the persons identified in Rules 0400-40-05-.05(6)(a-c).

## **E. SCHEDULE OF COMPLIANCE**

Full operational level shall be attained after the construction of the treatment system is complete and the treatment and spray irrigation system are placed into operation.

## **PART II**

### **A. GENERAL PROVISIONS**

#### **1. Duty to Reapply**

The permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Resources (the "Director") no later than 180 days prior to the expiration date.

#### **2. Right of Entry**

The permittee shall allow the Director, or authorized representatives, upon the notification of permittee and presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

#### **3. Availability of Reports**

All reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Resources.

#### **4. Proper Operation and Maintenance**

The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

The monitoring frequency stated in this permit shall not be construed as specifying a minimum level of operator attention to the facility. It is anticipated that visits to the treatment facility by the operator will occur at intervals frequent enough to assure proper operation and maintenance, but in no case less than one visit every fourteen days OR in accordance with an operating and

maintenance inspection schedule in the permit administrative file record. If monitoring reports, division's inspection reports, or other information indicates a problem with the facility, the permittee may be subject to enforcement action and/or the permit may be modified to include increased parameter monitoring, increased monitoring frequency or other requirements as deemed necessary by the division to correct the problem. The permittee shall ensure that the certified operator is in charge of the facility and observes the operation of the system frequently enough to ensure its proper operation and maintenance regardless of the monitoring frequency stated in the permit

Dilution water shall not be added to comply with effluent requirements.

The spray dispersal area shall not be used for vehicular traffic or vehicular parking. Dozers, trucks, tractors, and other heavy vehicles shall not be allowed to run over the spray dispersal area lines or other parts of the system.

#### 5. 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.

#### 6. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

#### 7. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

### **B. CHANGES AFFECTING THE PERMIT**

#### 1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

#### 2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in section 69-3-108 (h) The Tennessee Water Quality Control Act as amended.



b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

### 3. Change of Ownership

This permit may be transferred to another person by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

### 4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

## C. NONCOMPLIANCE

### 1. Effect of Noncompliance

Any permit noncompliance constitutes a violation of applicable State laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

### 2. Reporting of Noncompliance

#### a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division environmental assistance center within 24 hours from the time the permittee becomes aware of the circumstances. (The environmental field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

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

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Monthly Operation Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

### 3. Overflow

a. "**Overflow**" means the unintended discharge to land or waters of Tennessee of wastes from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office on a monthly basis. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Resources EFO staff to petition for a waiver based on mitigating evidence.

#### 4. Upset

a. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- i. An upset occurred and that the permittee can identify the cause(s) of the upset;
- ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
- iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and
- iv. The permittee complied with any remedial measures required under "Adverse Impact."

#### 5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

#### 6. Bypass

a. "**Bypass**" is the intentional diversion of wastewater away from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

- b. Bypasses are prohibited unless all of the following 3 conditions are met:
- i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;
  - ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;
  - iii. The permittee submits notice of an unanticipated bypass to the Division of Water Resources in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.
- c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 6.b.iii, above.

## **D. LIABILITIES**

### **1. Civil and Criminal Liability**

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

### **2. Liability Under State Law**

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.

### **PART III OTHER REQUIREMENTS**

#### **A. CERTIFIED OPERATOR**

The waste treatment facilities shall be operated under the supervision of a certified wastewater treatment operator and the collection system shall be operated under the supervision of a certified collection system operator in accordance with the Water Environmental Health Act of 1984.

#### **B. PLACEMENT OF SIGNS**

The permittee shall place a sign at the entrances of the spray area and all reasonable approaches to the spray irrigation lot. The sign should be clearly visible to the public. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material.

**RECLAIMED WASTEWATER  
SPRAY IRRIGATION  
(PERMITTEE'S NAME)  
(PERMITTEE'S PHONE NUMBER)  
TENNESSEE DIVISION OF WATER  
RESOURCES  
Jackson Environmental Field Office  
PHONE NUMBER: 1-888-891-8332**

No later than sixty (60) days from the effective date of the permit, the permittee shall have the above sign(s) on display in the location specified. New facilities must have the signs installed upon commencing operation.

#### **B. POTW PRETREATMENT PROGRAM GENERAL PROVISIONS**

**This section applies at such time NPDES Permit # TN0064611 is terminated, expired without being administratively continued, or the pretreatment program language in that permit is either stayed or rendered ineffective. The references to federal rule in this part have corresponding state rule references that are hereby incorporated by reference to Rule 0400-40-14.**

As an update of information previously submitted to the division, the permittee will undertake the following activity.

a. The permittee has been delegated the primary responsibility and therefore becomes the "control authority" for enforcing the 40 CFR 403 General Pretreatment Regulations as implemented through state Rule 0400-40-14. Where multiple plants are concerned the permittee is responsible for the Pretreatment Program for all plants within its jurisdiction. The permittee shall implement and enforce the Industrial Pretreatment Program in accordance with Section

403(b)(8) of the Clean Water Act, the Federal Pretreatment Regulations 40 CFR 403, Tennessee Water Quality Control Act Part 63-3-123 through 63-3-128, and the legal authorities, policies, procedures, and financial provisions contained in its approved Pretreatment Program, except to the extent this permit imposed stricter requirements. Such implementation shall require but not limit the permittee to do the following:

- i. Carry out inspection, surveillance, and monitoring procedures which will determine, independent of information supplied by the industrial user (IU), whether the IU is in compliance with the pretreatment standards;
  - ii. Require development, as necessary, of compliance schedules for each IU for the installation of control technologies to meet applicable pretreatment standards;
  - iii. Require all industrial users to comply with all applicable monitoring and reporting requirements outlined in the approved pretreatment program and IU permit;
  - iv. Maintain and update, as necessary, records identifying the nature and character of industrial user discharges, and retain such records for a minimum of three (3) years;
  - v. Obtain appropriate remedies for noncompliance by an IU with any pretreatment standard and/or requirement;
  - vi. Publish annually, pursuant to 40 CFR 403.8 (f)(2)(viii), a list of industrial users that have significantly violated pretreatment requirements and standards during the previous twelve-month period.
  - vii. Maintain an adequate revenue structure for continued operation of the pretreatment program.
  - viii. Update its Industrial Waste Survey at least once every five years. Results of this update shall be submitted to the Division of Water Resources, Pretreatment Section within 120 days of the effective date of this permit, unless such a survey has been submitted within 3 years of the effective date.
  - ix. Submit a written technical evaluation of the need to revise local limits within 120 days of the effective date of this permit to the state pretreatment program coordinator. The evaluation shall include the most recent pass-through limits proposed by the division. The technical evaluation shall be based on practical and specialized knowledge of the local program and not be limited by a specified written format.
- b. The permittee shall enforce 40 CFR 403.5, "prohibited discharges". Pollutants introduced into the POTW by a non-domestic source shall not cause pass through or interference as defined in 40 CFR Part 403.3. These general prohibitions and the specific prohibitions in this section apply to all non-domestic sources introducing pollutants into the POTW whether the source is subject to other National Pretreatment Standards or any state or local pretreatment requirements.

Specific prohibitions. Under no circumstances shall the permittee allow introduction of the following wastes in the waste treatment system:

- i. Pollutants which create a fire or explosion hazard in the POTW;
  - ii. Pollutants which will cause corrosive structural damage to the treatment works, but in no case discharges with pH less than 5.0 unless the system is specifically designed to accept such discharges.
  - iii. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the treatment system resulting in interference.
  - iv. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment works.
  - v. Heat in amounts which will inhibit biological activity in the treatment works resulting in interference, but in no case heat in such quantities that the temperature at the treatment works exceeds 40°C (104°F) unless the works are designed to accommodate such heat.
  - vi. Any priority pollutant in amounts that will contaminate the treatment works sludge.
  - vii. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
  - viii. Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
  - ix. Any trucked or hauled pollutants except at discharge points designated by the POTW.
- c. The permittee shall notify the Tennessee Division of Water Resources of any of the following changes in user discharge to the system no later than 30 days prior to change of discharge:
- i. New introductions into such works of pollutants from any source which would be a new source as defined in Section 306 of the Act if such source were discharging pollutants.
  - ii. New introductions of pollutants into such works from a source which would be subject to Section 301 of the "Federal Water Quality Act as Amended" if it were discharging such pollutants.
  - iii. A substantial change in volume or character of pollutants being introduced into such works by a source already discharging pollutants into such works at the time the permit is issued.

This notice will include information on the quantity and quality of the wastewater introduced by the new source into the publicly owned treatment works, and on any anticipated impact on the effluent discharged from such works. If this discharge necessitates a revision of the current NPDES permit or pass-through guidelines, discharge by this source is prohibited until the Tennessee Division of Water Resources gives final authorization.

d. Reporting Requirements

The permittee shall provide a semiannual report briefly describing the permittee's pretreatment program activities over the previous six-month period. Reporting periods shall end on the last day of the months of March and September. The report shall be submitted to the Division of Water Resources, Central Office and a copy to the appropriate Environmental Field Office no later than the 28th day of the month following each reporting period. For control authorities with multiple STPs, one report should be submitted with a separate Form 1 for each STP. Each report shall conform to the format set forth in the State POTW Pretreatment Semiannual Report Package which contains information regarding:

- i. An updated listing of the permittee's industrial users.
- ii. Results of sampling of the influent and effluent of the wastewater treatment plant. At least once each reporting period, the permittee shall analyze the wastewater treatment plant influent and effluent for the following pollutants, using the prescribed sampling procedures:

Effluent is measured at Outfall 001 (after treatment and prior to the storage lake):

Pollutant	Sample Type
chromium, trivalent	24-hour composite
chromium, hexavalent	24-hour composite
copper	24-hour composite
lead	24-hour composite
nickel	24-hour composite
zinc	24-hour composite
cadmium	24-hour composite
mercury	24-hour composite
silver	24-hour composite
total phenols	grab
cyanide	grab

If any particular pollutant is analyzed more frequently than is required, the permittee shall report the maximum and average values on the semiannual report. All upsets, interferences, and pass-through violations must also be reported on the semiannual report, the actions that were taken to



determine the causes of the incidents and the steps that have been taken to prevent the incidents from recurring.

At least once during the term of this permit, the permittee shall analyze the effluent from the STP (and report the results in the next regularly scheduled report) for the following pollutants:

chromium III	cyanide	phthalates, sum of the following: bis (2-ethylhexyl) phthalate butyl benzylphthalate di-n-butylphthalate diethyl phthalate
chromium VI	silver	
copper	benzene	
lead	carbon tetrachloride	
nickel	chloroform	
zinc	ethylbenzene	1,2 trans-dichloroethylene
cadmium	methylene chloride	tetrachloroethylene
mercury	naphthalene	toluene
phenols, total	1,1,1 trichloroethane	trichloroethylene

iii. Compliance with categorical and local standards, and review of industrial compliance, which includes a summary of the compliance status for all permitted industries. Also included is information on the number and type of major violations of pretreatment regulations, and the actions taken by the POTW to obtain compliance. The effluent from all significant industrial users must be analyzed for the appropriate pollutants at least once per reporting period.

iv. A list of industries in significant non-compliance as published in local newspapers in accordance with the requirements set forth in 40 CFR 403.8(f)(2)(viii).

A description of all substantive changes made to the permittee's pretreatment program. Any such changes shall receive prior approval. Substantive changes include, but are not limited to, any change in any ordinance, major modification in the program's administrative structure, local limits, or a change in the method of funding the program.

vi. Summary of permittee's industrial user inspections, which includes information on the number and type of industry inspected. All significant industrial users must be inspected at least once per year.

**D. ADDITION OF WASTE LOADS**

The permittee may not add wasteloads to the existing treatment system without the knowledge and approval of the division.

**E. OWNERSHIP OF THE TREATMENT FACILITIES**

a. The permittee shall own the treatment facilities (and the land upon which they are constructed) including the land to be utilized for spray or spray irrigation. A perpetual easement (properly recorded) may be accepted in lieu of ownership. If the permittee elects to make the treated wastewater available for reuse (irrigation of a golf course for example) a backup

dedicated land application site must be provided or a perpetual easement must be obtained for the property where reuse is to take place. The perpetual easement must allow year-round application of the wastewater except where the permittee has provided (and the division has approved) storage facilities for periods when reuse is not available. Evidence of ownership of the treatment facility land application site(s) and/or a copy of the perpetual easement(s) must be furnished to the division for approval prior to construction of the wastewater collection and treatment system.

b. Where the treatment facility serves private homes, condominiums, apartments, retirement homes, nursing homes, trailer parks, or any other place where the individuals being served have property ownership, rental agreements, or other agreements that would prevent their being displaced in the even of abandonment or noncompliance of the sewerage system, ownership of the treatment facilities must be by a municipality, a public utility, a wastewater authority, or a privately owned public utility (having a Certificate of Convenience and Necessity from the Tennessee Regulatory Authority), or another public agency.

**ADDENDUM TO RATIONALE AT PERMIT ISSUE**

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**Camden STP**  
**NPDES Permit No. SOP-15022**  
**Date: 08/23/16**  
**Permit Writer: Hari Akunuri/Wade Murphy**

**SPRAY IRRIGATION SITE FENCE REQUIREMENT**

The division revises the fence requirement on Page 3 of the permit at permit issue. During review of the construction plans and specifications for this proposed design, it became apparent that the proposed fence requirement (entire spray area) conflicted with the proposed construction plans and specifications. Due to the volume of the spray irrigation areas (300 acres), the permit now requires Camden to secure entrances to the irrigation areas along public roads and other public access points. This means that areas along roads with impassible ditches would not require fencing or that fencing is not specifically required along the property perimeter that adjoins private property. However, the revised permit condition has the added stipulation that evidence of unauthorized entry will be investigated and a remedy sought immediately. Related references to fencing in other parts of the permit are edited to be consistent with the revised requirement.

**RATIONALE**

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**Camden STP**  
**NPDES Permit No. SOP-15022**  
**Date: 12/15/15**  
**Permit Writer: Hari Akunuri/Wade Murphy**

**1. FACILITY INFORMATION**

<p><b>Camden STP</b> <b>Mr. Johnny Townsend - Superintendent</b> <b>Camden, Benton County, Tennessee</b> <b>(731) 584-4656</b> <b>Treatment Plant Average Design Flow: 0.5 MGD</b> <b>Percentage Industrial Flow: %</b> <b>Treatment Description: 2 cell partial-mix lagoon, storage lake and</b> <b>spray irrigation to 1.5 MGD</b> <b>Certified Operator Grades: STP: BNA; CS: I; Date Rated: 12/03/2015</b></p>
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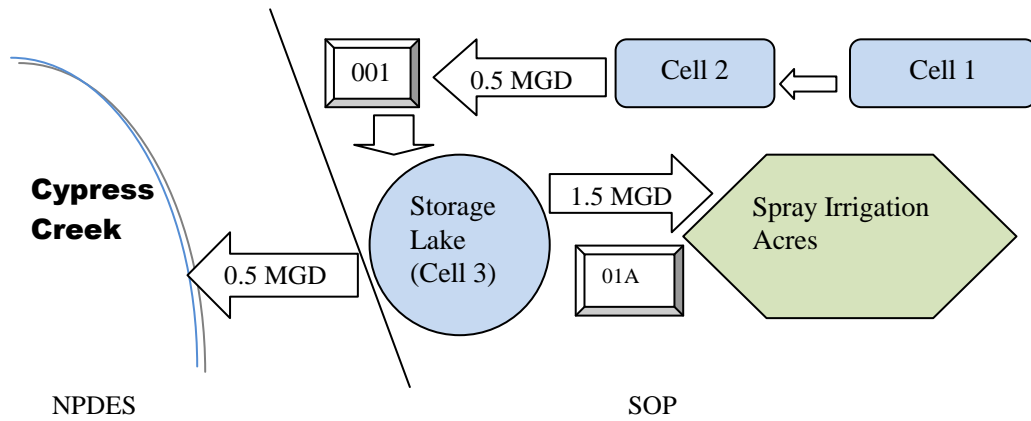
**2. NEW PERMIT LIMITATIONS**

- a. Camden intends to operate a spray irrigation disposal system in conjunction with its municipal wastewater lagoon. Camden has purchased property sufficient to spray irrigate up to 1.5 MGD of treated municipal wastewater. Camden has purchased 469 acres in order to provide 300± acres of disposal area after delineating buffer zones and setbacks from streams. These acres are currently identified as the Cole and Patterson properties and Map 64, Parcels 11.00 and 14.00 respectively.
- b. The associated treatment lagoon is already permitted to operate and discharge to Mile 12.8 of Cypress Creek via NPDES Permit # TN0064611. The lagoon is a hydrograph-controlled release (HCR) lagoon with a permitted design capacity of 0.5 MGD and limitations authorizing discharge only when specified dilution ratios are met. Historically, the treatment lagoon consisted of 2 treatment cells followed by a 3<sup>rd</sup> cell for storage when discharge ratios were insufficient to allow discharge.

As part of the spray irrigation system upgrade, Camden is not adding new cells but rather aerators, a new chlorine contact chamber and improved piping to ensure consistent water quality for irrigation. This arrangement relieves the hydraulic loading limitation presented by the hydrograph controlled release conditions. Camden expressly intends to operate the lagoon/spray irrigation activity under a state operating permit and to leave only the discharges to Cypress Creek regulated under the NPDES permit.

Therefore, this state operation permit (SOP) establishes terms and conditions that apply to both domestic wastewater treatment and industrial pretreatment in accordance with state rules 0400-40-05-.09 and 0400-40-14. It authorizes hydraulic disposal of treated wastewater up to 1.5 MGD and authorizes the biological treatment of the domestic wastewater in a lagoon with design capacity of 0.5 MGD as depicted in the following graphic:

c. Treatment Plant Schematic



Camden POTW Treatment System with Spray Irrigation

3. PROPOSED EFFLUENT LIMITS AND RATIONALE OUTFALL 01A (LAKE STORAGE EFFLUENT TO SPRAY FIELDS)

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (MGD)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM	DAILY MINIMUM PERCENT REMOVAL	RATIONALE
BOD <sub>5</sub>	45 mg/L	—	—	—	—	—	Rule 0400-40-05-.09
NH <sub>3</sub> -N					Report (mg/L)	—	BPJ
<i>E. coli</i> (colonies/100ml)	---	—	—	—	941/100 ml	—	Rule 0400-40-05-.09
Flow (MGD):							
Effluent	—	Report	—	—	Report (MGD)	—	Used to quantify loading rate
Sanitary Sewer Overflows, Total Occurrences*			Report			See below	
Dry Weather Overflows, Total Occurrences*			Report			See below	
Bypass of Treatment, Total Occurrences*			Report			See below	

\*These conditions do not duplicate the NPDES permit and apply to the SOP only if the NPDES is ineffective.

Rationale continued on the next page.

## BOD<sub>5</sub>

Rule 0400-40-05-.09 requires facilities that treat municipal and/or domestic wastewater but that do not discharge into waters of the state to be limited in terms of BOD<sub>5</sub> and other pollutants as necessary to assure efficient operation and protection of groundwater. Additionally, Rule 0400-40-05-.08 requires public owned treatment works to apply the best practicable waste treatment technology. The lagoon system used by Camden meets this condition. Best practicable technology is not a function of the end disposal method. Therefore the division applies the monthly average of 45 mg/L BOD<sub>5</sub> treatment level promulgated for municipal and domestic wastewater lagoons in 0400-40-05-.09 as the minimum treatment standard for the treatment associated with spray irrigation disposal. This is less stringent than the 35 mg/L that currently applies to the discharges to Cypress Creek. The anti-backsliding provisions of Rule 0400-40-05-.08 do not apply since this is a new permit and the purchase and development of 300± acres of spray irrigation area materially changes the circumstances under which the permit terms and conditions are applied. Due to the seasonal variability of lagoon treatment and variability inherent in municipal wastewater, the division proposes that BOD<sub>5</sub> be limited, monitored and reported monthly.

## Ammonia as Nitrogen

Municipal and domestic wastewater contain ammonia and proteins that form ammonia during biological treatment. A well-operated and maintained biological process creates an environment whereby this ammonia is converted into other forms of nitrogen. Therefore, the level of ammonia remaining in an effluent is indicative of the level and consistency of biological treatment. In lagoon systems, the level of ammonia reduction varies seasonably due to the negative impact that cold temperatures have on ammonia removal and due to creation of ammonia via the life cycle of algae that is naturally present in lagoons cells. This parameter is report only and will be monthly with the intent that it coincide with the BOD<sub>5</sub> monitoring to provide a more complete representation of pollutant removal.

## *E. coli*

*E. coli* is an indicator of the how well the treated wastewater is disinfected to kill pathogenic organisms. *E. coli* are a type of bacteria found in the digestive systems of mammals, so this type of bacteria serves as an indicator of recent, undisinfected, fecal contamination. Disinfection of treated wastewater used for spray irrigation is necessary to protect human health through direct contact and to prevent contamination of groundwater. No standard is promulgated specifically for spray irrigation activities. State water quality standards do contain a daily maximum *E. coli* limit to protect the recreational uses of state waters. The division applies this daily maximum standard to spray irrigation permits since the value is easily met by best practical waste treatment technology. (Ref. 0400-40-03-.03). The permit proposes monthly monitoring and reporting to demonstrate that disinfecting is consistently successful.

### Flow

Monthly average and daily maximum flow rates are necessary to reflect the application rate of wastewater to disposal areas. Effluent flow to the spray irrigation fields is to be continuous.

This permit does not limit flow. Flow rates are referenced in the permit and rationale for purposes of identifying the scope of treatment and disposal activities. Spray irrigation is limited by the narrative conditions in Part I.A of the permit that prohibit run off to surface streams, etc.

### Overflow and Bypass

Collection system overflow and bypass of treatment prohibitions apply to the municipal collection and treatment system whether the system operation is regulated via an NPDES or a SOP permit. These conditions already apply via NPDES Permit #TN0064611. No additional reporting is required in the SOP reporting except in the following scenarios:

The NPDES permit is terminated;  
The NPDES permit is expired and not administratively continued; and  
The terms and conditions of the NPDES permit are otherwise stayed or ineffective.

## 4. OTHER PERMIT REQUIREMENTS AND CONDITIONS

### 4.1. Certified Wastewater Treatment Operator

The waste treatment facilities shall be operated under the supervision of a Biological Natural Systems certified wastewater treatment operator in accordance with the Water Environmental Health Act of 1984. Operator grades are under jurisdiction of the Water and Wastewater Operators Certification Board. This NPDES permit is under jurisdiction of the Tennessee Board of Water Quality, Oil and Gas. Operator grades are rated and recommended by the Division of Water Resources pursuant to Rule 0400-49-01 (formerly 1200-05-03) and are included in this fact sheet for reference. The grades are intentionally not specified in the permit so that the operation certification board can authorize changes in grade without conflicting with this permit.

### 4.2. Collection System Certified Operator

The collection system shall be operated under the supervision of a Grade I certified collection system operator in accordance with the Water Environmental Health Act of 1984.



#### 4.3. Pretreatment Program

The Camden STP has an approved industrial pretreatment program which is implemented through its NPDES Permit # TN0064611. The pretreatment program is required per state regulation as well as federal rule. Anytime the pretreatment program cannot be implemented via the NPDES permit, implementation will be effected through this SOP permit. Therefore, the permit includes the pretreatment program language in Part III with a qualifier regarding when the terms and conditions are effective.

For purposes of demonstrating that industrial pretreatment has not caused upset or pass-through of the biological treatment process, effluent monitoring associated for pretreatment program purposes is at Outfall 001 located after biological treatment (partial mix and settling/polishing) and before the lake storage. The division does not recognize the storage lake as a treatment. Treatment requires detention time and detention time is not guaranteed as there will be need to manage the lake volume to provide storage to comply with the NPDES permit discharge conditions or to otherwise minimize discharges to Cypress Creek.

#### 4.4. Biosolids/Sludge Management

Tennessee regulates the land application of biosolids under state rules, Chapter 0400-40-15. The state rules became effective on June 30, 2013. This permit does not include biosolids language since removal of solids from lagoons is an infrequent activity.

#### 4.5. Permit Term

This permit is being issued for 5 years with no expectation that it remain on the division's Watershed Cycle for NPDES permits.