

Kansas Permit No.: M-MO28-0001

WIMB Rec'd OCT 05 2009

Federal Permit No.: KS0119601

KANSAS WATER POLLUTION CONTROL PERMIT AND
AUTHORIZATION TO DISCHARGE UNDER
THE NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM

Pursuant to the Provisions of Kansas Statutes Annotated 65-164 and 65-165, the Federal Water Pollution Control Act as amended, (33 U.S.C. 1251 et seq; the "Act"),

Owner: Johnson County Wastewater

Owner's Address: 11811 S. Sunset Drive, Suite 2500
Olathe, Kansas 66061-7061

Facility Name: Johnson County Douglas L. Smith
Middle Basin Wastewater Treatment Plant

Facility Location: 10001 College Boulevard
Overland Park, Kansas 66210
NW $\frac{1}{4}$, Section 13, Township 13S, Range 24E
Johnson County, Kansas
PLANT Latitude: 38.92381, Longitude: -94.70239
OUTFALL 001A1 Latitude: 38.92181,
Longitude: -94.70167
OUTFALL 002A1: Latitude: 38.92108,
Longitude: -94.70293

Receiving Stream: Indian Creek
River Basin: Missouri River Basin

is authorized to discharge from the wastewater treatment facility described herein, in accordance with effluent limits and monitoring requirements as set forth herein.

This permit is effective _____, supercedes the previously issued water pollution control permit M-MO28-0001 and expires _____.

001A1 Mechanical Plant Discharge

1. Primary sedimentation (5 basins)
2. BNR Activated Sludge (4 basins)
 - a. Fermentation Basins
 - b. Selector Basins
 - c. Aeration Basins
3. Final sedimentation (5 Basins)
4. Anaerobic sludge digestion (2 stage)
5. UV disinfection
6. Cascade aeration
7. Avg. Daily Flow = 14.5 MGD
8. Peak Wet Weather Flow = 23.0 MGD

002A1 Peak Wet Weather Biological Basin

1. Bar screens
2. Peak flow pump station
3. Two cell aerated biological basin
4. Chlorine disinfection
5. Dechlorination

007A1 Raw Sewage to Blue River (MO) WWTF via KCMO Interceptor Line

Secretary, Kansas Department of Health and Environment

Date

A. EFFLUENT LIMITS AND MONITORING REQUIREMENTS (continued)

April			
Daily Maximum	17.1		
Monthly Average	4.2		
May			
Daily Maximum	14.5		
Monthly Average	3.0		
June			
Daily Maximum	14.5		
Monthly Average	2.3		
July			
Daily Maximum	14.5		
Monthly Average	1.8		
August			
Daily Maximum	12.2		
Monthly Average	1.6		
September			
Daily Maximum	14.5		
Monthly Average	2.2		
October			
Daily Maximum	20.0		
Monthly Average	4.2		
November			
Daily Maximum	14.5		
Monthly Average	4.7		
December			
Daily Maximum	14.5		
Monthly Average	6.1		
E. coli-colonies/100 ml		3/Week	Grab
April through October			
Monthly Geometric Mean	262		
November through March			
Monthly Geometric Mean	2358		
pH - Standard Units	6.0 - 9.0	Weekly	Grab
Dissolved Oxygen-mg/l			
Weekly Average, Minimum	6.0	Weekly	Grab
Temperature-°C	Monitor	Weekly	Field
Total Phosphorus (as P)-mg/l***	Monitor	Monthly	24-Hour Composite
Total Phosphorus (as P)-lbs/day	Calculate	Monthly	Calculate
Nitrate (NO ₃) + Nitrite (NO ₂) as N-mg/l****	Monitor	Monthly	24-Hour Composite
Total Kjeldahl Nitrogen (TKN) as N-mg/l****	Monitor	Monthly	24-Hour Composite

A. EFFLUENT LIMITS AND MONITORING REQUIREMENTS (continued)Monitoring Location006A6 (EDMR code: ICDS006A6)- Indian Creek - Downstream of the Discharge from Outfalls 001A1/002A1

Dissolved Oxygen-mg/l Weekly Average, Minimum	Monitor	Weekly	Grab
Temperature-°C	Monitor	Weekly	Field
Ammonia (as N)-mg/l	Monitor	Weekly	Grab
pH - Standard Units	Monitor	Weekly	Grab
Stream Flow - cfs	See Supplemental Condition 4		USGS Station

Monitoring Location007A1 (EDMR code: KCMO007A1)-Raw Sewage to Blue River (MO) WWTF via KCMO Interceptor Line

Flow - MGD	Monitor	Daily (When Used)	Meter
------------	---------	----------------------	-------

- * Minimum removal of 85% required for Biochemical Oxygen Demand (5-Day) and Total Suspended Solids, for the mechanical plant. If inhibited BOD5 test is used, limits are 5 mg/l less than shown.
- ** Permittee shall conduct testing for total residual chlorine according to the methods prescribed in 40 CFR Part 136. Permittee shall use test equipment and procedures to measure the total residual chlorine at or below the current acceptable quantification level for total residual chlorine in wastewater of 100 µg/l.
- *** See Supplemental Condition E.5.
- **** Permittee shall sample for these tests on the same day and calculate the total nitrogen only when both test values are available. The Minimum Reportable Limit (MRL) for TKN is 1 mg/l and for nitrate + nitrite is 0.1 mg/l. Values less than the MRL shall be reported using the less than sign (<) with the MRL value but for purposes of calculating and reporting the total nitrogen result, less than values shall be defaulted to zero.

B. STANDARD CONDITIONS

In addition to the specified conditions stated herein, the permittee shall comply with the attached Standard Conditions dated August 1, 1996.

C. PRETREATMENT PROGRAM

The permittee shall continue to implement and administer their Pretreatment Program in accordance with the General Pretreatment Regulations 40 CFR Part 403, as approved by the Kansas Department of Health and Environment or the Environmental Protection Agency.

D. SCHEDULE OF COMPLIANCE

1. Permittee shall achieve substantial completion of the upgrade project by March 31, 2010.
2. After 2 years but before 3 years after substantial completion of this upgrade, permittee shall conduct a study on the effects of the discharges from this facility on the quality and biota of the receiving stream downstream of outfalls 001A and 002A. The study results shall be provided to KDHE within three months of completion of the study.

F. BIO-MONITORING AND PRIORITY POLLUTANTS (continued)

- d. Permittee shall also test a portion of the same effluent sample used for the WET test for the following substances (required minimum reportable detection levels are in parenthesis):

Antimony (10 µg/L)*	Nickel (10 µg/L)*
Arsenic (10 µg/L)*	Selenium (5 µg/L)*
Beryllium (5 µg/L)*	Silver (2 µg/L)*
Cadmium (2 µg/L)*	Thallium (10 µg/L)*
Chromium (10 µg/L)*	Zinc (20 µg/L)*
Copper (10 µg/L)*	Ammonia as "N" (0.2 mg/L)
Lead (5 µg/L)*	Total Hardness as CaCO ₃ mg/L
Mercury (0.2 µg/L-Cold Vapor Method)	

* Parameter shall be tested and reported as "total recoverable" metals.

Permittee may coordinate sampling for this test with other monitoring requirements of this permit and may use the test results to satisfy this and other corresponding testing requirements. The permittee shall use a laboratory approved by KDHE for Whole Effluent Toxicity testing.

2. Priority Pollutant Scan

- a. A Priority Pollutant Scan on the effluent shall be conducted between January 1 and June 30, 2014 for the parameters listed in the attached Table I, Priority Pollutant Scan. Sample results shall be reported with the next Discharge Monitoring Report following receipt of the results but not later than August 28, 2014.

Sample type shall be 24-hour composite except for Volatiles which shall be a grab sample. See Supplemental Condition F.1.d. for minimum detection limits for certain metals in the Priority Pollutant Scan.

Priority Pollutant Scan (continued)

Base/Neutral

Acenaphthene (mg/l)
Acenaphthylene (mg/l)
Anthracene (mg/l)
Benzidine (mg/l)
Benzo(a) anthracene (mg/l)
Benzo(a)pyrene (mg/l)
3,4-benzofluoranthene (mg/l)
Benzo (ghi) perylene (mg/l)
Benzo (b) fluoranthene (mg/l)
Bis(2-chloroethoxy)methane (mg/l)
Bis(2-chloroethyl)ether (mg/l)
Bis(2-ethylhexyl)phthalate (mg/l)
Bis(2-chloroisopropyl) ether (mg/l)
1,2-diphenylhydrazine (mg/l)
Fluoranthene (mg/l)
Fluorene (mg/l)
Nitrobenzene (mg/l)
N-nitrosodimethylamine (mg/l)
N-nitrosodi-n-propylamine (mg/l)
N-nitrosodiphenylamine (mg/l)
Phenanthrene (mg/l)
Pyrene (mg/l)
1,2,4-trichlorobenzene (mg/l)
4-bromophenyl phenyl ether (mg/l)
Butyl benzyl phthalate (mg/l)
2-chloronaphthalene (mg/l)
4-chlorophenyl phenyl ether (mg/l)
Chrysene (mg/l)
Dibenzo(a,h) anthracene (mg/l)
1,2-dichlorobenzene (mg/l)
1,3-dichlorobenzene (mg/l)
1,4-dichlorobenzene (mg/l)
3,3-dichlorobenzidine (mg/l)
Dimethyl phthalate (mg/l)
Diethyl phthalate (mg/l)
Di-n-butyl phthalate (mg/l)
2,4-dinitrotoluene (mg/l)
2,6-dinitrotoluene (mg/l)
Di-n-octyl phthalate (mg/l)
Hexachlorobenzene (mg/l)
Hexachlorobutadiene (mg/l)
Hexachlorocyclopentadiene (mg/l)
Hexachloroethane (mg/l)
Indeno (1,2,3-cd) pyrene (mg/l)
Naphthalene (mg/l)
Isophorone (mg/l)

STANDARD CONDITIONS FOR
KANSAS WATER POLLUTION CONTROL AND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

1. Representative Sampling:

- A. Samples and measurements taken as required herein shall be representative of the nature and volume of the monitored discharge. All samples shall be taken at the location designated in this permit, and unless specified, at the outfall(s) before the effluent joins or is diluted by any other water or substance.
- B. Monitoring results shall be recorded and reported on forms acceptable to the Division and postmarked no later than the 28th day of the month following the completed reporting period. Signed and certified copies of these, prepared in accordance with KAR 28-16-59 and all other reports required herein, shall be submitted to:

Kansas Department of Health & Environment
Bureau of Water-Technical Services Section
1000 SW Jackson Street, Suite 420
Topeka, KS 66612-1367

2. Schedule of Compliance: No later than 14 calendar days following each date identified in the "Schedule of Compliance," the permittee shall submit to the above address, either a report of progress or, in the case of specific action being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or, if there are no more scheduled requirements, when such noncompliance will be corrected.

3. Definitions:

- A. The "daily average" discharge means either the total discharge by weight during a calendar month divided by the number of days in the month that the facility was operating or the average concentration for the month. The daily average discharge shall be determined by the summation of all measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made, or by the summation of all concentrations determined during the calendar month divided by the number of samples collected and analyzed.
- B. The "daily maximum" discharge means the total discharge by weight or average concentration during a 24 hour period.
- C. The "monthly average", other than for fecal coliform bacteria, is the arithmetic mean of the value of effluent samples collected in a period of 30 consecutive days. The monthly average for fecal coliform bacteria is the geometric mean of the value of the effluent samples collected in a period of 30 consecutive days.
- D. The "weekly average", other than for fecal coliform bacteria, is the arithmetic mean of the value of effluent samples collected in a period of 7 consecutive days. The weekly average for fecal coliform bacteria is the geometric mean of the value of effluent samples collected in a period of 7 consecutive days.
- E. A "grab sample" is an individual sample collected in less than 15 minutes.
- F. A "composite sample" is a combination of individual samples in which the volume of each individual sample is proportional to the discharge flow, the sample frequency is proportioned to the flow rate over the sample period, or the sample frequency is proportional to time.
- G. The "act" means the Clean Water Act, 30 USC Section 1251 et seq.
- H. The terms "Director", "Division", and "Department" refer to the Director, Division of Environment, Kansas Department of Health and Environment, respectively.
- I. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes 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.
- J. "Bypass" means any diversion of waste streams from any portion of a treatment facility or collection system.

13. **Transfer of Ownership:** The permittee shall notify the succeeding owner or controlling person of the existence of this permit by certified letter, a copy of which shall be forwarded to the Division. The succeeding owner shall secure a new permit. The permit is not transferable to any person except after notice and approval by the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.
14. **Availability of Records:** Except for data determined to be confidential under 33 USC Section 1318, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement on any such report or tampering with equipment to falsify data may result in the imposition of criminal penalties as provided for in 33 USC Section 1319 and KSA 65-170c.
15. **Permit Modifications and Terminations:** As provided by KAR 28-16-62, after notice and opportunity for a hearing, this permit may be modified, suspended or revoked or terminated in whole or in part during its term for cause as provided, but not limited to those set forth in KAR 28-16-62 and KAR 28-16-28b through f. The permittee shall furnish to the Director, within a reasonable amount of 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 upon request, copies of all records required to be kept by this permit.
16. **Toxic Pollutants:** Notwithstanding paragraph 15 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified at such effluent standards) is established under 33 USC Section 1317(a) for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition. Nothing in this permit relieves the permittee from complying with federal toxic effluent standards as promulgated pursuant to 33 USC Section 1317.
17. **Civil and Criminal Liability:** Except as authorized in paragraph 9 above, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance as provided for in KSA 65-170d, KSA 65-167, and 33 USC Section 1319.
18. **Oil and Hazardous Substance Liability:** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under 33 USC Section 1321 or KSA 65-164 et seq. The municipal permittee shall promptly notify the Division by telephone upon discovering crude oil or any petroleum derivative in its sewer system or wastewater treatment facilities.
19. **Industrial Users:** The municipal permittee shall require any industrial user of the treatment works to comply with 33 USC Section 1317, 1318 and any industrial user of storm sewers to comply with 33 USC Section 1308.
20. **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 infringements of or violation of federal, state or local laws or regulations.
21. **Operator Certification:** The permittee shall ensure the wastewater facilities are under the supervision of an operator certified by the Department. If the permittee does not have a certified operator or loses its certified operator, appropriate steps shall be taken to obtain a certified operator as required by KAR 28-16-30 et seq.
22. **Severability:** The provisions of this permit are severable. If any provision of this permit or any circumstance is held invalid, the application of such provision to other circumstances and the remainder of the permit shall not be affected thereby.
23. **Removal from Service:** The permittee shall inform the Division at least three months before a pumping station, treatment unit, or any other part of the treatment facility permitted by this permit is to be removed from service and shall make arrangements acceptable to the Division to decommission the facility or part of the facility being removed from service such that the public health and waters of the state are protected.
24. **Duty to Reapply:** A permit holder wishing to continue any activity regulated by this permit after the expiration date, must apply for a new permit at least 180 days prior to expiration of the permit.

PROPOSED LIMITATIONS: The proposed permit is based upon an average discharge flow of 14.5 MGD to Indian Creek. The current permit contains an E. coli limit of 160 colonies/100ml which is the primary A contact recreation criteria. This was an error in the current permit as the receiving streams at the discharge location (and beyond) are classified as a primary B contact recreation streams. Therefore, the proposed permit corrects this error by implementing the primary B recreation criteria for E. coli at end of pipe. The permit retains the existing limits for TSS, dissolved oxygen, and pH. ~~Water quality based limits are established for biochemical oxygen demand, ammonia, E. coli, and total chlorine residual.~~ Monitoring will continue to be required for nutrients, temperature, and daily flow. Although the receiving stream is not indicated as impaired for dissolved oxygen, DO monitoring will be continued in order to monitor plant performance. The calculations for the proposed limits include the contribution to flow and pH of the downstream Johnson Co. Tomahawk Creek Plant to Indian Creek upstream of the Tomahawk Creek WWTF. The current permit's limits for BOD, TSS, E. coli, and pH will be continued for the peak wet weather biological basin, and ~~monitoring will continue to be required for ammonia, total chlorine residual and flow.~~

T2C

Upstream and downstream monitoring of Indian Creek will continue to be required, with monitoring for dissolved oxygen, temperature, ammonia, and pH.

Whole effluent toxicity and heavy metals testing will be required annually. A Priority Pollutant Scan will be required to be performed at least once during the life of the permit. WET testing has indicated the plant can generally meet toxicity criteria. KDHE retains the right to increase or decrease testing requirements based upon the test results and require the permittee to conduct investigations and correction of any toxic conditions caused in the receiving stream by the facility's effluent.

The upgraded wastewater treatment facility has been constructed to provide BNR treatment and the permittee is to operate the treatment facility to maximize the level of nutrient removal with the goal of achieving the following target effluent levels:

- A. Total Nitrogen \leq 8.0 mg/l as an annual average.
- B. Total Phosphorus \leq 1.5 mg/l as an annual average.

These target values are not to be considered as effluent limits for this permit. KDHE reserves the right to re-open this permit to impose limits for nutrients pursuant to Kansas law after such criteria are adopted in the Kansas Surface Water Quality Standards.