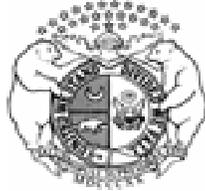


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0103349

Owner: City of Joplin
Address: 602 South Main Street, Joplin, MO 64801

Continuing Authority: Same as above
Address: Same as above

Facility Name: Joplin – Turkey Creek Wastewater Treatment Facility
Facility Address: 3457 West Eddy Lane, Joplin, MO 64801

Legal Description: NW¼, SE¼, Sec. 29, T28N, R33W, Jasper County
Latitude/Longitude: +3707175/-09433135

Receiving Stream: Turkey Creek (P)
First Classified Stream and ID: Turkey Creek (P) (03216) 303(d) List
USGS Basin & Sub-watershed No.: (11070207 – 160020)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

See page two (2)

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

January 26, 2007 March 9, 2007
Effective Date Revised Date



Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

January 25, 2012
Expiration Date
MO 780-0041 (10-93)



Edward Galbraith, Director of Staff, Clean Water Commission

FACILITY DESCRIPTION (continued)

Outfall #002 – Equalization basin structure, is not anticipated to be used except for emergency conditions when the plant and equalization basin are all at capacity.

Outfall #004 – POTW – SIC #4952

Advanced treatment facility utilizing primary clarifiers/trickling filters/intermediate clarifiers/final clarifications/sand filtration tertiary treatment/activated sludge/sludge is land applied.

Design population equivalent is 100,000.

Design flow is 15 MGD (24 MGD peak flow).

Actual flow is 9.3 MGD.

Design sludge production is 2,340 dry tons/year.

Actual sludge production is 824 dry tons/year.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 16	
					PERMIT NUMBER MO-0103349	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until four (4) years and 364 days from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #004</u> – Main facility outfall Fecal Coliform (Note 5)	#/100mL	*		*	Once/week	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>March 28, 2007</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective one (1) day before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #004</u> – Main facility outfall Fecal Coliform (Note 5)	#/100mL	1000		400	Once/week	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>March 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					PAGE NUMBER 4 of 16	
					PERMIT NUMBER MO-0103349	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #004 – Main facility outfall Flow	MGD	*		*	Once/week	24 hr. total
Carbonaceous Biochemical Oxygen Demand ₅ **	mg/L		10	10	Once/week	24 hr. composite
Total Suspended Solids**	mg/L		45	30	Once/week	24 hr. composite
pH – Units	SU	***		***	Once/week	grab
Ammonia as N (April 1 – October 31)	mg/L	2.5		2.5	Once/week	grab
(November 1 – March 31)	mg/L	3.0		3.0	Once/week	grab
Arsenic, Total Recoverable	mg/L	0.030		0.020	Once/month	grab
Cadmium, Total Recoverable	mg/L	0.026		0.017	Once/month	grab
Chromium, Total Recoverable	mg/L	0.061		0.042	Once/month	grab
Copper, Total Recoverable	mg/L	0.056		0.037	Once/month	grab
Lead, Total Recoverable	mg/L	0.044		0.029	Once/month	grab
Mercury, Total Recoverable	mg/L	0.0007		0.0005	Once/month	grab
Nickel, Total Recoverable	mg/L	0.967		0.650	Once/month	grab
Zinc, Total Recoverable	mg/L	0.660		0.440	Once/month	grab
Cyanide, Amenable to Chlorination	mg/L	0.008		0.005	Once/month	grab
Pentachlorophenol (Note 1)	mg/L					
(pH 6.5)		0.005		0.003	Once/month	grab
(pH 7.0)		0.009		0.004	Once/month	grab
(pH ≥ 7.5)		0.013		0.007	Once/month	grab
Phenol	mg/L	0.150		0.100	Once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>March 28, 2007</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Total Toxic Organics (Note 2)	mg/L	*			Twice/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2007</u> .						
Whole Effluent Toxicity (WET) Test	% Survival	See Part D -Special Conditions			Twice/year	24 hr. composite
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2007</u> .						

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #002</u> – Emergency overflow basin (Note 3) Flow	MGD	*		*	Once/day/ discharge	24 hr. estimate
Biochemical Oxygen Demand**	mg/L		45	30	Once/discharge	grab
Total Suspended Solids**	mg/L		45	30	Once/discharge	grab
Ammonia as N	mg/L	*		*	Once/discharge	grab
pH – Units	SU	***		***	Once/discharge	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE March 28, 2007.

Arsenic, Total Recoverable	mg/L	0.03		0.02	Once/quarter****	grab
Cadmium, Total Recoverable	mg/L	0.026		0.017	Once/quarter****	grab
Chromium, Total Recoverable	mg/L	0.061		0.042	Once/quarter****	grab
Copper, Total Recoverable	mg/L	0.056		0.037	Once/quarter****	grab
Lead, Total Recoverable	mg/L	0.044		0.029	Once/quarter****	grab
Mercury, Total Recoverable	mg/L	0.0007		0.0005	Once/quarter****	grab
Nickel, Total Recoverable	mg/L	0.967		0.65	Once/quarter****	grab
Zinc, Total Recoverable	mg/L	0.66		0.44	Once/quarter****	grab
Cyanide, Amenable to Chlorination	mg/L	0.008		0.005	Once/quarter****	grab
Pentachlorophenol (Note 1)	mg/L					
(pH 6.5)		0.005		0.003	Once/quarter****	grab
(pH 7.0)		0.009		0.004	Once/quarter****	grab
(pH ≥ 7.5)		0.013		0.007	Once/quarter****	grab
Phenol	mg/L	0.15		0.10	Once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2007.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					PAGE NUMBER 6 of 16	
					PERMIT NUMBER MO-0103349	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Instream Sampling (Note 4)</u> – Permittee shall collect an upstream and downstream. Analysis shall be conducted as follows:						
Arsenic, Dissolved	mg/L	*		*	Once/quarter****	grab
Cadmium, Dissolved	mg/L	*		*	Once/quarter****	grab
Chromium, Dissolved	mg/L	*		*	Once/quarter****	grab
Copper, Dissolved	mg/L	*		*	Once/quarter****	grab
Lead, Dissolved	mg/L	*		*	Once/quarter****	grab
Mercury, Dissolved	mg/L	*		*	Once/quarter****	grab
Nickel, Dissolved	mg/L	*		*	Once/quarter****	grab
Zinc, Dissolved	mg/L	*		*	Once/quarter****	grab
Pentachlorophenol	mg/L	*		*	Once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2007</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> and <u>August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

PERMIT NUMBER MO-0103349

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective three (3) years from the date of issuance of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #004</u>						
Flow	MGD	*		*	Once/week	24 hr. estimate
Carbonaceous Biochemical Oxygen Demand ₅ **	mg/L		10	10	Once/week	24 hr. composite
Total Suspended Solids**	mg/L		20	15	Once/week	24 hr. composite
pH – Units	SU	***		***	Once/week	grab
Ammonia as N (March 1 – May 31)	mg/L	6.8		3.4	Once/week	grab
(June 1 – August 31)		3.1		1.6	Once/week	grab
(September 1 – November 30)		6.8		3.4	Once/week	grab
(December 1 – February 29)		7.5		3.7	Once/week	grab
Oil & Grease	mg/L	15		10	Once/month	grab
Cyanide, Amenable to Chlorination	mg/L	0.007		0.004	Once/month	grab
Arsenic, Total Recoverable	mg/L	*		*	Once/month	grab
Cadmium, Total Recoverable	mg/L	0.0008		0.0004	Once/month	grab
Chromium (III), Total Recoverable	mg/L	*		*	Once/month	grab
Chromium (VI), Total Recoverable	mg/L	0.016		0.008	Once/month	grab
Copper, Total Recoverable	mg/L	0.021		0.011	Once/month	grab
Lead, Total Recoverable	mg/L	0.013		0.006	Once/month	grab
Mercury, Total Recoverable	mg/L	0.0009		0.0003	Once/month	grab
Nickel, Total Recoverable	mg/L	0.171		0.058	Once/month	grab
Zinc, Total Recoverable	mg/L	0.22		0.11	Once/month	grab
Pentachlorophenol (Note 1)	mg/L					
(pH 6.5)		0.005		0.001	Once/month	grab
(pH 7.0)		0.008		0.002	Once/month	grab
(pH ≥ 7.5)		0.012		0.004	Once/month	grab
Phenol	mg/L	0.184		0.070	Once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>March 28, 2010</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Total Toxic Organics (Note 2)	mg/L	*			Twice/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2010</u> .						
Whole Effluent Toxicity (WET) Test	% Survival	See Part D -Special Conditions			Twice/year	24 hr. composite
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2010</u> .						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

PERMIT NUMBER MO-0103349

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective three (3) years from the date of issuance of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #002 – Emergency overflow basin (Note 3)						
Flow	MGD	*		*	Once/day/discharge	grab
Biochemical Oxygen Demand ₅ **			45	30	Once/discharge	24 hr. composite
Total Suspended Solids**			45	30	Once/discharge	24 hr. composite
Temperature	°C	*		*	Once/discharge	grab
Ammonia as N	mg/L	*		*	Once/discharge	grab
pH – Units	SU	***		***	Once/discharge	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE March 28, 2010.						
Cyanide, Amenable to Chlorination	mg/L	0.007		0.004	Once/quarter****	grab
Arsenic, Total Recoverable	mg/L	*		*	Once/quarter****	grab
Cadmium, Total Recoverable	mg/L	0.0008		0.0004	Once/quarter****	grab
Chromium (III), Total Recoverable	mg/L	*		*	Once/quarter****	grab
Chromium (VI), Total Recoverable	mg/L	0.016		0.008	Once/quarter****	grab
Copper, Total Recoverable	mg/L	0.021		0.011	Once/quarter****	grab
Lead, Total Recoverable	mg/L	0.013		0.006	Once/quarter****	grab
Mercury, Total Recoverable	mg/L	0.0009		0.0003	Once/quarter****	grab
Nickel, Total Recoverable	mg/L	0.171		0.058	Once/quarter****	grab
Zinc, Total Recoverable	mg/L	0.22		0.11	Once/quarter****	grab
Pentachlorophenol (Note 1)	mg/L					
(pH 6.5)		0.005		0.001	Once/quarter****	grab
(pH 7.0)		0.009		0.002	Once/quarter****	grab
(pH ≥ 7.5)		0.012		0.004	Once/quarter****	grab
Phenol	mg/L	0.184		0.070	Once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2010.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					PAGE NUMBER 9 of 16	
					PERMIT NUMBER MO-0103349	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective three (3) years from the date of issuance of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Instream Sampling (Note 4) – Permittee shall collect an upstream and downstream sample. Analysis shall be conducted as follows:						
Hardness	mg/L	*		*	Once/quarter****	grab
Arsenic, Dissolved	mg/L	*		*	Once/quarter****	grab
Cadmium, Dissolved	mg/L	*		*	Once/quarter****	grab
Chromium (III), Dissolved	mg/L	*		*	Once/quarter****	grab
Chromium (VI), Dissolved	mg/L	*		*	Once/quarter****	grab
Copper, Dissolved	mg/L	*		*	Once/quarter****	grab
Lead, Dissolved	mg/L	*		*	Once/quarter****	grab
Mercury, Dissolved	mg/L	*		*	Once/quarter****	grab
Nickel, Dissolved	mg/L	*		*	Once/quarter****	grab
Zinc, Dissolved	mg/L	*		*	Once/quarter****	grab
Pentachlorophenol	mg/L	*		*	Once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2007</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> and <u>August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** This facility has Influent Monitoring Requirements as described in Part C – Influent Monitoring Requirements below.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- **** Sample once per quarter in the months of March, June, September, and December.

Note 1 – Effluent limitations for Pentachlorophenol (PCP) are dependent upon the pH of the effluent.

Note 2 – See “Total Toxic Organics” page.

Note 3 – Outfall #002 will normally have no discharge. Discharge is permitted only when influent flow exceeds Outfall #004 treatment plan hydraulic flow capacity and when effluent quality is within permitted limitations.

Note 4 – Receiving water monitoring conditions:

1. Downstream samples should be taken immediately (10 yards or less) below the established mixing zone. For most class P streams the mixing zone is ¼ mile. For facilities discharging to class P streams that sustain flows too low for a mixing zone to be allowed, monitoring should be performed as detailed above. In the event that a safe, accessible location is not present at this location, a suitable location can be negotiated with the department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flowing down stream.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

2. When conducting in-stream monitoring, the permittee shall record observations that include: the time of day, weather conditions, unusual stream/lake characteristics (e.g., septic conditions, algae growth, etc.), the stream segment (e.g., riffle, pool or run) or the lake depth from where the sample was collected. These observations shall be submitted with the sample results.
3. Samples shall not be collected from areas with especially turbulent flow, still water or from the stream bank, unless these conditions are representative of the stream reach or no other areas are available for sample collection. Sampling should not be made when significant precipitation has occurred recently. The sampling event should be terminated and rescheduled if any of the following conditions occur:
 - If turbidity in the stream increases notably; or
 - If rainfall over the past two weeks exceeds 2.5 inches or exceeds 1 inch in the last 24 hours
4. Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for the Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.
5. To obtain accurate measurements, D.O., temperature and pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.

Please contact the department if you need additional instructions or assistance.

Note 5 – Final limitations and monitoring requirements for Fecal Coliform. Please see **Part E – SCHEDULE OF COMPLIANCE**.

C. INFLUENT MONITORING REQUIREMENTS		PERMIT NUMBER MO-0103349	
The facility is required to meet a removal efficiency of 85% or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:			
SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Influent</u> Carbonaceous Biochemical Oxygen Demand ₅	mg/L	Once/month	grab
Biochemical Oxygen Demand ₅	mg/L	Once/month	grab
Total Suspended Solids	mg/L	Once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2007</u> .			

MO 780-0010 (8/91)

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.

D. SPECIAL CONDITIONS (continued)

- (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Report as no-discharge when a discharge does not occur during the report period.

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

D. SPECIAL CONDITIONS (continued)

8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.
9. The permittee shall submit a report semi-annually in April and October with the Discharge and Monitoring reports which address measures taken to locate and eliminate sources of infiltration and inflow into the City's collection system.
10. If the facility is a POTW wastewater treatment facility providing at least primary treatment during a precipitation event and discharges on a noncontinuous basis, the discharge may be allowed provided that only the wastewater in excess of the capacity of the noncontinuous wastewater treatment plant hydraulic capacity may be discharged.
11. Permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 40 CFR Part 403. The approved pretreatment program is hereby incorporated by reference.
12. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	A.E.C. %	FREQUENCY	SAMPLE TYPE	MONTH
#004	100	Twice/year	24 hr. composite	March & June

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a SINGLE-dilution test in the months and at the frequency specified above. For tests which are successfully passed, submit test results USING THE DEPARTMENT'S WET TEST REPORT FORM #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - (a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
 - (b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
 - (c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.
 - (d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
 - (e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
 - (f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - (h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
 - (i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
 - (j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
 - (k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
 - (l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.

D. SPECIAL CONDITIONS (continued)

- (m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
- (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
- (3) If the effluent fails the test, a multiple dilution test shall be performed within 30 calendar days and biweekly thereafter, until one of the following conditions are met:
- (a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
- (b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.
- (5) The permittee shall submit a concise summary of all test results for the test series to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
- (6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
- (7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
- (8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
- (10) Submit a concise summary in tabular format of all test results with the annual report.
- (b) PASS/FAIL procedure and effluent limitations:
- (1) To pass a single-dilution test, mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other Federal guidelines as appropriate or required.
- (2) To pass a multiple-dilution test:
- (a) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC), OF 30% OR LESS THE AEC must be less than three-tenths (0.3) of the LC_{50} concentration for the most sensitive of the test organisms; **OR**,
- (b) For facilities with an AEC greater than 30% the LC_{50} concentration must be greater than 100%; **AND**,
- (c) all effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.

D. SPECIAL CONDITIONS (continued)

(c) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS.
- (3) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
- (4) When dilutions are required, upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (5) Single-dilution tests will be run with:
 - (a) Effluent at the AEC concentration;
 - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - (c) reconstituted water.
- (6) Multiple-dilution tests will be run with:
 - (a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
 - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - (c) reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

E. SCHEDULE OF COMPLIANCE

1. The final daily maximum and monthly average Fecal Coliform limits of 400/100ml and 1000/100ml, respectively, shall become effective one day prior to the expiration date of the permit or December 31, 2013, whichever comes first unless items (b) or (c) below are approved by the Department. The Effluent Regulation, 10 CSR 20-7.015(9)(H), allows the permittee up to five years from the issuance date of this permit to:
 - (a) Install disinfection facilities, or;
 - (b) Present an evaluation to show that disinfection is not required to protect one or both recreational uses, or;
 - (c) Present a Use Attainability Analysis (UAA) that demonstrates one or both designated recreational uses are not attainable in the classified waters receiving the effluent.

If chlorination is the chosen method of disinfection, a Total Residual Chlorine limit will be added to the permit.

SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls

Total Toxic Organics (Note 2)

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon Tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
Hexachloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-chloroethyl vinyl ether
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate

Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-benzanthracene (benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-benzofluoranthene (benzo(b)fluoranthene)
11,12-benzofluoranthene (benzo(k)fluoranthene)
Chrysene
Anthracene
1,12-benzoperylene (benzo(ghi)perylene)
Fluorene
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane (1,3-dichloropropane)
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene

4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene Chloride (dichloromethane)
Methyl Chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
Phenanthrene
1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Indeno (1,2,3-cd) pyrene
(2,3-o-phenylene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl Chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide (BHC hexachlorocyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC (PCB polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene

ADDENDUM
TO
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

Original Fact Sheet completed on: August 24, 2006
Addendum completed on: February 5, 2007

NPDES PERMIT NUMBER: MO-0103349
FACILITY NAME: Joplin – Turkey Creek Wastewater Treatment Facility
OWNER NAME: City of Joplin

On January 25, 2007, Missouri State Operating Permit number MO-0103349 (operating permit) was issued to the City of Joplin for the Turkey Creek Wastewater Treatment Facility. This operating permit was for the renewal of the previous state operating permit. This operating permit did not contain a Pretreatment Condition and therefore has been opened to install said condition. As per Missouri State Regulation [10 CSR 20-6.100(7)(B)], Incorporation of Approved Programs in Permits. *The POTW's NPDES permit will be reissued or modified by the state to incorporate the approved program conditions as enforceable conditions of the permit. The modification of a POTW's NPDES permit for the purposes of incorporating a POTW pretreatment program approved in accordance with the procedures in section (9) shall be deemed a minor permit modification.*

Addendum to Fact Sheet completed by:

Michael Abbott, Environmental Specialist – II
NPDES and Storm Water Permits Section
Water Protection Program
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Date of Fact Sheet: August 24, 2006

Date of Public Notice:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0103349

FACILITY NAME: Joplin – Turkey Creek Wastewater Treatment Facility

OWNER NAME: City of Joplin

LOCATION: NE ¼, SE ¼, Sec. 29, T28N, R33W, Jasper County:

RECEIVING STREAM: Turkey Creek

FACILITY CONTACT PERSON: Tim Nyander

TELEPHONE: (417) 624-3615

FACILITY DESCRIPTION

This advanced WWTF with a design flow of 15 MGD utilizes primary clarifiers, trickling filters, intermediate clarifiers, final clarification, and sand filtration tertiary treatment. Sludge from the facility is activated and also land applied.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, protection of aquatic life, and whole body contact recreation. The facilities receiving stream is also a 2002 Missouri 303(d) listed stream for Zinc from multiple Pb-Zn AMLs.

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations are being established under federal and state laws.

EFFLUENT LIMIT DERIVATION & RATIONALE

A derivation and discussion of the effluent limits are located in the Water Quality Review Sheet for the Joplin – Turkey Creek WWTF. This WQRS was approved on August 18, 2006, and revised on December 26, 2006. A copy of this WQRS is available upon request.

This permit will be issued for a period of five years.