

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-0028789

Owner: City of Centralia
Address: 114 South Rollins, Centralia, MO 65240

Continuing Authority: Same as above
Address: Same as above

Facility Name: Centralia Wastewater Disposal Facility
Facility Address: 1191 East Booth, Centralia, MO 65240

Legal Description: SEE PAGES 2 & 3
UTM Coordinates: SEE PAGES 2 & 3

Receiving Stream: SEE PAGES 2 & 3
First Classified Stream and ID: SEE PAGES 2 & 3
USGS Basin & Sub-watershed No.: SEE PAGES 2 & 3

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 PAGES 2 & 3

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.

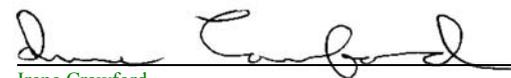
December 19, 2008
Effective Date

December 17, 2010
Revised Date



Kip A. Stetzler, Acting Director
Department of Natural Resources

December 18, 2013
Expiration Date



Irene Crawford
Regional Director, Northeast Regional Office

FACILITY DESCRIPTION (continued) - CLASS "D" OPERATOR REQUIRED

Outfall #001 – Northwest System – SIC #4952 POTW

Two cell lagoon / partial irrigation / sludge is retained in lagoon or land applied.
Design population equivalent is 1,460.
Design flow is 146,000 gallons per day.
Actual flow is 97,000 gallons per day.
Design sludge production is 22 dry tons/year.

Legal Description: NE ¼, NE ¼, NW ¼, Sec. 9, T51N, R11W, Boone County
UTM Coordinates: X= 572996.400, Y= 4342149.621
Receiving Stream: Goodwater Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Outfall #002 – Northeast System – SIC #4952 POTW

Three-cell lagoon with first basin baffled to create a primary aerated cell / partial irrigation or can flow to outfall #6 / sludge is retained in lagoon or land applied.
Design population equivalent is 6,600.
Design flow is 660,000 gallons per day.
Actual flow is 408,000 gallons per day.
Design sludge production is 99 dry tons/year.

Legal Description: NW ¼, NE ¼, SW ¼, Sec. 12, T51N, R11W, Audrain County
UTM Coordinates: X= 577863.939, Y= 4341337.718
Receiving Stream: Unnamed tributary to Youngs Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Permitted Feature #003 – Sims Storage Cell – SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.
99,899,000 gallons stored. 21.9 acres. 14 feet deep. Irrigates 918 acres.

Legal Description: N ½, SE ¼, Sec. 25, T52N, R12W, Audrain County
UTM Coordinates: X= 569077.034, Y= 4346212.621
Receiving Stream: Unnamed tributary to Long Branch (U)
First Classified Stream and ID: Long Branch (C) (00139)
USGS Basin & Sub-watershed No.: (07110006-030002)

Permitted Feature #004 – Bowne Storage Cell – SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.
20,800,000 gallons stored. 5.32 acres 12 feet deep. Irrigates 90 acres.

Legal Description: NE ¼, NE ¼, Sec. 1, T51N, R12W, Boone County
UTM Coordinates: X= 568775.980, Y= 4343931.630
Receiving Stream: Unnamed tributary to Long Branch (U)
First Classified Stream and ID: Long Branch (C) (00139)
USGS Basin & Sub-watershed No.: (07110006-030002)

Permitted Feature #005 – Benoit Storage Cell – SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.
26,899,014 gallons stored. 4.99 acres 16 feet deep. Irrigates 255 acres.

Legal Description: NW ¼, NW ¼, Sec. 2, T51N, R11W, Boone County
UTM Coordinates: X= 575825.794, Y= 4343777.978
Receiving Stream: Unnamed tributary to Goodwater Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

FACILITY DESCRIPTION (continued)

Outfall #006 – Northeast Lagoon Overland Flow System – SIC #4952

Receives effluent from Northeast Lagoon System

Three - 3.73 acre (11.19 total acres) Overland Flow Fields

Design population equivalent is 6,600. The design population equivalent is from the Northeast Lagoon System. This is not to be added to the design population for Outfall #001 and #002.

Design flow is 660,000 gallons per day. The design flow is from the Northeast Lagoon System. This is not to be added to the design flow for Outfall #001 and #002.

Legal Description: SE ¼, SW ¼, NW ¼, Sec. 12, T51N, R11W, Audrain County
UTM Coordinates: X= 577465.008, Y= 4341381.376
Receiving Stream: Unnamed tributary to Youngs Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Outfall #001 & #002

<u>Design Basis:</u>	<u>Avg. Annual</u>
Design dry weather flows:	<u>806,000</u> gpd
Design with 1-in-10 year flows:	<u>1,000,000</u> gpd
Design PE:	<u>8060</u>

Storage Basin (also includes remote storage at 003, 004 & 005):

Freeboard for basin: 2 foot
Storage volume (minimum to maximum water levels): 255 Million Gallons

Storage Capacity (in Days; also includes remote storage at 003, 004 & 005):

Design for Dry Weather Flows: 316 days
Design with 1-in 10 year flows: 365 days

Permitted Features #003, #004 & #005 Land Application:

Irrigation Volume/year:	<u>293,875,000</u> gallons (including 1-in-10 year flows)
Irrigation areas:	<u>382</u> acres at design loading (<u>382</u> acres total available)
Application rates/acre:	<u>0.5</u> inch/hour; <u>1</u> inch/day; <u>1</u> inch/week; <u>7</u> inches/year
Field slopes:	Less than <u>5</u> percent
Equipment type:	<u>Center Pivot</u>
Vegetation:	<u>Crops</u>
Application Rate is based on:	<u>Hydraulic Loading</u>

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 4 of 13
	PERMIT NUMBER MO-0028789

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 upon issuance 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 #001 & 002 – (Notes 1 & 2)</u>						
Flow	MGD	*		*	once/weekday***	24 hr. estimate
Biochemical Oxygen Demand ₅ *****	mg/L		45	30	once/week**	grab
Total Suspended Solids*****	mg/L		45	30	once/week**	grab
Total Ammonia Nitrogen (May 1 – Oct 31)	mg/L	6.2		2.4	once/week**	grab
(Nov 1 – Apr 30)	mg/L	8.4		3.2		
pH	SU	****		****	once/week**	grab
Oil & Grease	mg/L	15		10	once/week**	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Cyanide, Amenable to Chlorination	µg/L	8.1		4.0	once/quarter*****	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter*****	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter*****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2009. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions	once/year	grab
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MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2009.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED PARTS I, II AND III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994 AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 13	
					PERMIT NUMBER MO-0028789	
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 upon issuance 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>Permitted Features #003, 004 & 005 - Land Application Operational Monitoring (Note 2)</u>						
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches/day	*			daily	total
Precipitation	inches	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2011</u> .						
<u>Permitted Features #003, 004 & 005 - Irrigated Wastewater (Note 3)</u>						
Total Kjeldahl Nitrogen as N	mg/L	*			once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2011</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>PARTS I, II AND III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 6 of 13		
				PERMIT NUMBER MO-0028789		
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 upon issuance 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 #006</u> Overland Flow System						
Flow	MGD	*		*	once/weekday***	24 hr. estimate
Biochemical Oxygen Demand ₅ *****	mg/L		45	30	once/week**	grab
Total Suspended Solids*****	mg/L		45	30	once/week**	grab
pH	SU	****		****	once/week**	grab
Total Ammonia Nitrogen (May 1 – Oct 31)	mg/L	6.2		2.4	once/week**	grab
(Nov 1 – Apr 30)	mg/L	8.4		3.2		
Oil & Grease	mg/L	15		10	once/week**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2009</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II and III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Monitor only when discharge occurs.
- *** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.
- **** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- ***** This facility is required to meet a removal efficiency of 65% or more.
- ***** See table below for quarterly sampling

Sample discharge at least once for the months of:	Report is due:
January, February, March (1st Quarter)	April 28
April, May, June (2nd Quarter)	July 28
July, August, September (3rd Quarter)	October 28
October, November, December (4th Quarter)	January 28

Note 1 - **Partial Irrigation Facility requirements.** Wastewater shall be land applied during suitable conditions.

Note 2 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms approved by the Department. The summarized annual report is in addition to the reporting requirements listed in Table A. The summarized annual report shall include the following:

- a. Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- b. The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- c. A summary of the irrigation operations including the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results. This report is in addition to the reporting requirements of Table A, Effluent Limitations and Monitoring Requirements.

Note 3 - Wastewater that is irrigated shall be sampled at the irrigation pump or wet well. If irrigation did not occur during the report period, report as "No Irrigation".

C. INFLUENT MONITORING REQUIREMENTS		PAGE NUMBER 7 of 13
		PERMIT NUMBER MO-0028789
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
<u>Influent</u> – Outfalls #001 and #002		
Biochemical Oxygen Demand ₅	mg/L	once/quarter***** grab
Total Suspended Solids	mg/L	once/quarter***** grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2009</u> .		

C. INFLUENT MONITORING REQUIREMENTS (continued)

***** See table below for quarterly sampling. Report as no-discharge when an effluent discharge from Outfall #001, #002, or #006 does not occur during the report period.

Sample discharge at least once for the months of:	Report is due:
January, February, March (1st Quarter)	April 28
April, May, June (2nd Quarter)	July 28
July, August, September (3rd Quarter)	October 28
October, November, December (4th Quarter)	January 28

D. SPECIAL CONDITIONS

1. Report as no-discharge when a discharge does not occur during the report period.
2. Outfalls must be marked in field. The outfalls and land application fields shall be marked on the aerial or topographic site map submitted with the permit application.
3. 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.
4. 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.

D. SPECIAL CONDITIONS (continued)

- (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.
- (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.

5. Wastewater Irrigation System.

- (a) Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
- (b) Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.
- (c) General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Wastewater shall be land applied only during daylight hours. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.
- (d) Saturated/Frozen Conditions. There shall be no irrigation during ground frost, frozen, snow covered, or saturated soil conditions, or when precipitation is imminent or occurring.
- (e) Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling or public use areas; or 50 feet of the property line.
- (f) Public Access Restrictions. Public access shall not be allowed to the irrigation sites at Outfalls 003, 004, and 005.
- (g) Operation and Maintenance Manual. The permittee shall develop, maintain, and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.
- (h) Nitrogen Loading Rates. Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater shall not exceed ten (10) mg/l of nitrate nitrogen as N. Hydraulic application rates exceeding 60 inches per acre per year shall calculate nitrogen loading rates and include results in the annual report. The calculation procedures are as follows: $(\text{Total N}) \times (0.226) \times (\text{inches per acre irrigated}) = \text{pounds total N per acre}$. Where $\text{Total N} = [\text{Total Kjeldahl Nitrogen (TKN) as N}] + [\text{Nitrate Nitrogen as N}]$. If the applied wastewater exceeds 150 pounds total nitrogen per acre/year, the permittee must reduce the application rates or submit a revised permit application to request use of the Plant Available Nitrogen (PAN) method based on crop nitrogen requirements for harvested crops, along with calculations to show the amount of plant-available nitrogen provided and the amount of nitrogen that will be utilized by the vegetation to be grown. PAN availability factors for surface application are: $[\text{Ammonia N} \times 0.6] + [\text{Nitrate N} \times 0.9] + [\text{Organic N} \times 0.6] = \text{PAN}$. If the applied wastewater exceeds ten (10) mg/l of nitrate nitrogen as N, then the facility shall submit a revised permit application to request use of the Plant Available Nitrogen (PAN) method based on crop nitrogen requirements for harvested crops, along with calculations to show the amount of plant-available nitrogen provided and the amount of nitrogen that will be utilized by the vegetation to be grown.
- (i) Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.

- 6. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. 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.

D. SPECIAL CONDITIONS (continued)

7. The permittee shall develop and implement a program for maintenance and repair of the collection system. The permittee shall submit a report annually in January to the Northeast Regional Office with the Discharge and Monitoring reports which address measures taken to locate and eliminate sources of infiltration and inflow into the collection system serving the facility.
8. Land Application Sites. To add additional land application sites or convert any of the land to public use areas, a construction permit and permit modification may be required. The facility shall contact the Department for a written determination. Upon approval of the changes to the land application sites, the O&M Manual shall be also updated to include the changes to the land application site(s) and a copy of the updated sections of the O&M Manual shall be submitted to the Northeast Regional Office in accordance with Special Condition #5 (g).
9. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B)1. or 2. within 90 days of notice of its availability. The permittee shall obtain department approval for closure or alternate use of the facility.
10. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	ONCE/YEAR	GRAB	ANY
002	100%	ONCE/YEAR	GRAB	ANY

Dilution Series						
100%	50%	25%	12.5%	6.25%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

- (a) Test Schedule and Follow-Up Requirements
 - (1) Perform a MULTIPLE-dilution acute WET 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.

D. SPECIAL CONDITIONS (continued)

- (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.
- (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 for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) 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 summary of all test results for the test series along with complete copies of the test reports as received from the laboratory 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 WET test results with the annual report.
- (b) PASS/FAIL procedure and effluent limitations:
 - (1) 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 LC₅₀ concentration for the most sensitive of the test organisms; **OR**,
 - (b) For facilities with an AEC greater than 30%, the LC₅₀ 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.
- (c) Test Conditions
 - (1) Test Type: Acute Static non-renewal
 - (2) All tests, including repeat tests for previous failures, shall include both test species listed below.

D. SPECIAL CONDITIONS (continued)

- (3) 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.
- (4) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.
- (5) 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.
- (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.

D. SPECIAL CONDITIONS (continued)

SUMMARY OF TEST METHODOLOGY FOR ACUTE 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

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an “Application for Transfer of Operating Permit” signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit’s expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal. This permit authorizes only the activities described in this permit.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF MODIFICATION
OF
MO-0028789
CENTRALIA WASTEWATER DISPOSAL FACILITY

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution 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. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) 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). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Major , Minor , Industrial Facility ; Variance ; Master General Permit ; General Permit Covered Facility ; and/or permit with widespread public interest .

Part I – Facility Information

Facility Type: POTW
 Facility SIC Code(s): 4952

Facility Description:

Outfall #001 – Two-cell lagoon / partial irrigation, Outfall #002 – Three-cell lagoon with first basin baffled to create a primary aerated cell / partial irrigation or can flow to Outfall #6 – three overland flow fields

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- No.

Application Date: 08/24/10
 Expiration Date: 12/18/13
 Last Inspection: 10/08/08 & 10/09/08 Non-Compliance In response to the inspection, the facility submitted the requested documentation to the Department on December 31, 2008.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (GPD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	146,000	Equivalent to Secondary/Irrigation	Domestic	
#002	660,000	Equivalent to Secondary/Irrigation	Domestic	
#006	flow from NE lagoon system	Equivalent to Secondary	Domestic	

Outfall #001 – Northwest System – SIC #4952 POTW

Two cell lagoon / partial irrigation / sludge is retained in lagoon or land applied.
 Design population equivalent is 1,460.
 Design flow is 146,000 gallons per day.
 Actual flow is 97,000 gallons per day.
 Design sludge production is 22 dry tons/year.

Legal Description: NE ¼, NE ¼, NW ¼, Sec. 9, T51N, R11W, Boone County
UTM Coordinates: X= 572996.400, Y= 4342149.621
Receiving Stream: Goodwater Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Outfall #002 – Northeast System – SIC #4952 POTW

Three-cell lagoon with first basin baffled to create a primary aerated cell / partial irrigation or can flow to outfall #6 / sludge is retained in lagoon or land applied.

Design population equivalent is 6,600.

Design flow is 660,000 gallons per day.

Actual flow is 408,000 gallons per day.

Design sludge production is 99 dry tons/year.

Legal Description: NW ¼, NE ¼, SW ¼, Sec. 12, T51N, R11W, Audrain County
UTM Coordinates: X= 577863.939, Y= 4341337.718
Receiving Stream: Unnamed tributary to Youngs Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Permitted Feature #003 – Sims Storage Cell – SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.

99,899,000 gallons stored. 21.9 acres. 14 feet deep. Irrigates 918 acres.

Legal Description: N ½, SE ¼, Sec. 25, T52N, R12W, Audrain County
UTM Coordinates: X= 569077.034, Y= 4346212.621
Receiving Stream: Unnamed tributary to Long Branch (U)
First Classified Stream and ID: Long Branch (C) (00139)
USGS Basin & Sub-watershed No.: (07110006-030002)

Permitted Feature #004 – Bowne Storage Cell – SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.

20,800,000 gallons stored. 5.32 acres 12 feet deep. Irrigates 90 acres.

Legal Description: NE ¼, NE ¼, Sec. 1, T51N, R12W, Boone County
UTM Coordinates: X= 568775.980, Y= 4343931.630
Receiving Stream: Unnamed tributary to Long Branch (U)
First Classified Stream and ID: Long Branch (C) (00139)
USGS Basin & Sub-watershed No.: (07110006-030002)

Permitted Feature #005 – Benoit Storage Cell – SIC #4952

Stores pumped effluent from Outfalls #001 & #002 for irrigation.

26,899,014 gallons stored. 4.99 acres 16 feet deep. Irrigates 255 acres.

Legal Description: NW ¼, NW ¼, Sec. 2, T51N, R11W, Boone County
UTM Coordinates: X= 575825.794, Y= 4343777.978
Receiving Stream: Unnamed tributary to Goodwater Creek (U)
First Classified Stream and ID: Youngs Creek (C) (00140)
USGS Basin & Sub-watershed No.: (07110006-030001)

Outfall #006 – Northeast Lagoon Overland Flow System – SIC #4952

Receives effluent from Northeast Lagoon System

Three - 3.73 acre (11.19 total acres) Overland Flow Fields

Design population equivalent is 6,600. The design population equivalent is from the Northeast Lagoon System. This is not to be added to the design population for Outfall #001 and #002.

Design flow is 660,000 gallons per day. The design flow is from the Northeast Lagoon System. This is not to be added to the design flow for Outfall #001 and #002

Legal Description: SE ¼, SW ¼, NW ¼, Sec. 12, T51N, R11W, Audrain County
 UTM Coordinates: X= 577465.008, Y= 4341381.376
 Receiving Stream: Unnamed tributary to Youngs Creek (U)
 First Classified Stream and ID: Youngs Creek (C) (00140)
 USGS Basin & Sub-watershed No.: (07110006-030001)

Comments:

This permit has been modified to address the following: Outfall #006 now lists 3 overland flow fields of 3.73 acres each or 11.19 total acres. Irrigation parameters listed under Outfall #006 under the facility description and Table A have been removed as this outfall is not for irrigation but overland flow treatment. As the lagoon systems were designed for partial irrigation and discharge, Note 1 was changed to remove the period on which the systems were not allowed to discharge. Freeboard reporting language in Note 3 was removed as the lagoon system was designed for discharge and is not a holding basin. The language requiring the facility to sample influent wastewater at the same time effluent samples are drawn was removed. If there is no discharge from the effluent during the quarter, the facility is to report “No Discharge” for the influent sample. The facility requested that Special Condition #5(a) be changed to remove the lagoon from the sentence, however, any unauthorized discharge (bypass) shall be reported to the department. A discharge from the outfall structure is not an unauthorized discharge in the modified permit. Additional changes included: updating the locational data for the outfalls and permitted features, separating Land Application Operational Monitoring and Irrigated Wastewater for Permitted Features #003, #004, and #005, updated the effluent pH limitation range to 6.5-9.0 SU as per the applicable section of 10 CSR 20-7.015, updated the language in Note 2 to clarify that the annual report is in addition to the reporting requirements in Table A, changed Note 3 to state that wastewater that is irrigated shall be sampled at the irrigation pump or wet well. If irrigation did not occurred during the report period, report as “No Irrigation”, updated Special Condition #2 to add aerial map to the sentence, updated the language in Special Conditions #5 (d) regarding weather and soil conditions when land application is not to occur, updated Special Condition #5 (f) by removing Outfall #006 as it is not a land application field, changed Special Condition #7 to remove reference to CMOM, inserted Special Condition #8 regarding the requirements for adding additional land application acreage, and moved existing Special Condition #8 to #9, updated the language in Special Condition #9 to current language, corrected the date the WET test is due on Table A, the report is due in January of each year, and added the Permit Transfer, Permit Renewal Requirements, Termination, and Duty of Compliance sections to the permit on Page 13 of the permit.

Part IIA – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
 - Municipalities
 - Public Sewer District:
 - County
 - Public Water Supply Districts:
 - Private sewer company regulated by the Public Service Commission:
 - State or Federal agencies:

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

This facility currently requires an operator with a D Certification Level. Please see **Appendix A - Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator’s Name: Michael R. Forsee
 Certification Number: 4640
 Certification Level: B

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part IIB– Operational Monitoring

As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]:
- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]:
- Special Stream [10 CSR 20-7.015(6)]:
- Subsurface Water [10 CSR 20-7.015(7)]:
- All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, 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 and/or 1st classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Goodwater Creek	U	NA	General Criteria	07110006	Central Plains/Cuivre/Salt
Unnamed tributary to Youngs Creek	U	NA	General Criteria		
Youngs Creek	C	00140	LWW, AQL, WBC-B***		
Unnamed tributary to Long Branch	U	NA	General Criteria		
Long Branch	C	00139	LWW, AQL, WBC-B****		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

** - Ecological Drainage Unit

*** - UAA conducted in 2007 and it was recommended to retain the use.

**** - UAA conducted in 2007 and the recommendation was incomplete.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable ; The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

ANTIDegradation:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- Modification - no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Sludge/biosolids are removed by contract hauler or are stored in the lagoon.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ; The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Not Applicable ; The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Not Applicable ; A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm.

Applicable ; Equivalent to Secondary Treatment is 65% removal [40 CFR Part 133.105(a)(3) & (b)(3)].

SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW & INFILTRATION (I&I) – PREVENTION/REDUCTION:

Sanitary Sewer Systems (SSSs) are municipal wastewater collection systems that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and storm water (i.e. I&I), to a POTW. SSSs are not designed to collect large amounts of storm water runoff from precipitation events.

Untreated or partially treated discharges from SSSs are commonly referred to as SSOs. SSOs have a variety of causes including blockages, line breaks, sewer defects that allow excess storm water and ground water to overload the system, lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. A SSO is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. SSSs can back up into buildings, including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, they are considered SSOs.

Applicable ; In accordance with 40 CFR Part 122.41(e), the permittee is required to develop and/or implement a program for maintenance and repair of the collection system and shall be required in this operating permit by either means of a Special Condition or Schedule of Compliance. In addition, the Department considers the development of this program as an implementation of this condition. Additionally, 40 CFR Part 403.3(o) defines a POTW to include any device and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW Treatment Plant.

At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002). The CMOM identifies some of the criteria used by the EPA to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable ; This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

Not Applicable ; At this time, the permittee is not required to develop and implement a SWPPP.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ; This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Not Applicable ; Wasteload allocations were not calculated.

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable ; WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable ; Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

- Facility is a designated Major.
- Facility is a municipality or domestic discharger with a Design Flow \geq 22,500 gpd.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

Not Applicable ; This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits and Sampling and Reporting Frequency

Effluent parameters for #003, #004, and #005 did not change. Outfalls #001 and #002 are discharging lagoon systems therefore Lagoon Freeboard and Precipitation were removed. Outfall #006 is an overland flow system and is not an irrigation system; therefore Irrigation Period, Volume Irrigated, Application Area, and Application Rate were removed. Measurement Frequency for Flows for Outfalls #001, #002 and #006 were changed from once per week to once per weekday. The effluent pH limitation range is now 6.5-9.0 SU as per the applicable section of 10 CSR 20-7.015.

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit is tentatively schedule to begin on November 5, 2010 or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. (Please explain). (Also if applicable – Due to the major modifications of this permit, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin on (DATE) or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: SEPTEMBER 28, 2010

Submitted by

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Brant Farris

Date

Lantz Tipton

Date

Part VII – Appendices

APPENDIX A - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	0.8
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	0.8
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	1
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	3
High rate	5	
Overland flow	4	4
Total from page ONE (1)	----	14.6

APPENDIX A - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	2
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	
Aerated lagoon	8	8
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	----	10
Total from page ONE (1)	---	14.6
Grand Total	---	24.6

- A: 71 points and greater
- B: 51 points – 70 points
- C: 26 points – 50 points
- D: 0 points – 25 points