

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-0094579

Owner: City of Warrensburg
Address: 102 South Holden, Warrensburg, Missouri 64093

Continuing Authority: Same as above
Address: Same as above

Facility Name: Warrensburg East Wastewater Treatment Plant
Facility Address: 441 Northeast 300 Road, Warrensburg, Missouri 64093

Legal Description: SW ¼, NW ¼, SE ¼, Sec. 3, T46N, R25W, Johnson County
UTM Coordinates: X=443094, Y=4295527

Receiving Stream: Bear Creek (C)
First Classified Stream and ID: Bear Creek (C) (933)
USGS Basin & Sub-watershed No.: (10300104 – 0301)

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952

The use or operation of this facility shall be by or under the supervision of a **Certified "B" Operator**

Influent pumping station / bar screens / aerated grit chamber / flow equalization basin / three (3) sequencing batch reactors / effluent pump station / UV disinfection/ sludge gravity thickener / four aerobic sludge digester basins / reed beds / sludge is land applied.

Design population equivalent is 15,000.

Design flow is 1.5 MGD.

Actual flow is 1.05 MGD.

Design sludge production is 244 dry tons/year.

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.

June 17, 2011
Effective Date

October 9, 2013
Modification Date

Sara Parker Pauley, Director, Department of Natural Resources

June 16, 2016
Expiration Date

John Madros, Director, Water Protection Program

OUTFALL #001	TABLE A-1. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 6
		PERMIT NUMBER MO-0094579

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:

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/weekday***	24 hr. total
Carbonaceous Biochemical Oxygen Demand ₅	mg/L		15	10	once/week	composite**
Total Suspended Solids	mg/L		20	15	once/week	composite**
<i>E. coli</i> (Note 1)	#/100 ml		1030	206	once/week	grab
pH – Units	SU	****		****	once/week	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	3.7 7.5		1.9 3.7	once/week	grab
Oil & Grease	mg/L	15		10	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2011. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Aluminum, Total Recoverable	µg/L	*		*	once/quarter *****	composite**
Copper, Total Recoverable	µg/L	29.7		17.1	once/quarter *****	composite**
Lead, Total Recoverable	µg/L	13.1		8.8	once/quarter *****	composite**

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JANUARY 28, 2014.

Whole Effluent Toxicity (WET) test	% Survival	See Special Condition #13		once/year	composite**
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WET TEST REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JULY 18, 2012.

- * Monitoring requirement only.
- ** A 24-hour composite sample is composed of at least 48 aliquots (subsamples) collected at flow proportional intervals by an automatic sampling device.
- *** 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.
- ***** See table below for quarterly sampling

Minimum Sampling Requirements			
Quarter	Months	Effluent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

**TABLE B.
INFLUENT MONITORING REQUIREMENTS**

PAGE NUMBER 3 of 6

PERMIT NUMBER MO-0094579

The facility is required to meet a removal efficiency of 85% or more as a monthly average. 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
Carbonaceous Biochemical Oxygen Demand ₅	mg/L	once/month	composite**
Total Suspended Solids	mg/L	once/month	composite**

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2011.

** A 24-hour composite sample is composed of at least 48 aliquots (subsamples) collected at flow proportional intervals by an automatic sampling device.

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated October 1, 1980, May 1, 2013, and August 15, 1994, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources intends to adopt the new ammonia criteria during the next review.

Refer to Part VII of this permit's factsheet to identify estimated future permit limits based on the default 2013 EPA criteria values for streams. Information on this topic can be obtained by viewing the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.pdf>.

2. 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.
 - (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.
 - (d) Incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Director of the Water Protection Program determines that a pretreatment program is necessary due to any new introduction of pollutants into the Publically Owned Treatment Works or any substantial change in the volume or character of pollutants being introduced.

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

3. All outfalls must be clearly marked in the field.

D. SPECIAL CONDITIONS (continued)

4. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

5. 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 by the Director in accordance with 40 CFR 122.44(f).
- (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.

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

7. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

8. Water Quality Standards

- (a) To the extent required by law, 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.

9. 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.

10. The permittee shall submit a report annually in November to the Kansas City 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.

11. Bypasses are not authorized at this facility and are subject to 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Kansas City Regional Office.

D. SPECIAL CONDITIONS (continued)

12. The permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 10 CSR 20-6.100. The approved pretreatment program is hereby incorporated by reference.

The permittee shall submit to the Department on or before March 31st of each year a report briefly describing its pretreatment activities during the previous calendar year. At a minimum, the report shall include the following:

- (a) An updated list of the Permittee's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Permittee shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The Permittee shall also list the Industrial Users that are subject only to local Requirements;
- (b) A summary of the status of Industrial User compliance over the reporting period;
- (c) A summary of compliance and enforcement activities (including inspections) conducted by the Permittee during the reporting period; and
- (d) Any other relevant information requested by the Department.

Pursuant to 40 CFR 122.44(j)(2)(ii), the permittee shall submit to the department a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1) along with the application for renewal of this permit.

13. 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	24 hr. composite**	Any

** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampler.

Dilution Series						
100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(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) 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.
 - (b) 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 analysis performed upon any other effluent concentration.
 - (c) 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.
- (2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is 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, synthetic laboratory control water may be used.
- (3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (4) 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.

D. SPECIAL CONDITIONS (continued)

- (4) If the effluent fails the test for BOTH test species, 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: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.
 - (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
 - (5) Follow-up tests do not negate an initial failed test.
 - (6) 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 availability of the third failed test.
 - (7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should 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. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. 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 the automatic trigger or 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.
 - (8) 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.
 - (9) 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.
 - (10) 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.
 - (11) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) 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 unless approved by the department on a case by case basis.
 - (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 "Allowable 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) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and 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.
 - (9) Whole-effluent-toxicity test 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

MISSOURI DEPARTMENT OF NATURAL RESOURCES
STATEMENT OF BASIS
FOR THE PURPOSE OF MODIFICATION
WARRENSBURG EAST WWTP
#MO-0094579

A Statement of Basis (Statement) gives pertinent information regarding the applicable regulations and rationale for the development of the NPDES Missouri State Operating Permit (operating permit). This Statement includes Wasteload Allocations, Water Quality Based Effluent Limitations, and Reasonable Potential Analysis calculations as well as any other calculations that effect the effluent limitations of this operating permit. This Statement does not pertain to operating permits that include sewage sludge land application plans and variance procedures. The Statement was 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 Statement is not an enforceable part of an operating permit.

Part I – Facility Information

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

Facility Description:

Influent pumping station / bar screens / aerated grit chamber / flow equalization basin / three (3) sequencing batch reactors / effluent pump station / UV disinfection/ sludge gravity thickener / four aerobic sludge digester basins / reed beds / sludge is land applied.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	2.325	Secondary	Domestic

Comments:

The modification to the permit included the following changes: corrected the legal description, modified the effluent limits for Total Recoverable Copper and Total Recoverable Lead, removed interim sections of Table A that have already passed, updated Table A to match the current permit templates, added an asterisk for Table A defining weekday, and updated Special Conditions. Additional changes include Special Condition #1 and Part VII of the Fact Sheet. These changes provide information regarding the upcoming changes to Water Quality Standards for Ammonia as N.

Part II – Operator Certification Requirements

Applicable ; This facility is required to have a certified operator.

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 20-9.020(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 B Wastewater Certification Level.

Operator’s Name: George D. Ballman
 Certification Number: 6698
 Certification Level: A

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 III– Operational Monitoring

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

Part IV – Receiving Stream Information

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: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Bear Creek	C	933	LWW, AQL, WBC-B	10300104-0301	0

* - 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).

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Bear Creek (C)	0	0	0

MIXING CONSIDERATIONS

MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)...]			ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(A)...]		
1Q10	7Q10	30Q10	1Q10	7Q10	30Q10
0	0	0	0	0	N/A

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part V – 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.

- Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

- Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

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.

- No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

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 & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). 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.

- Permittee land applies biosolids in accordance with Standard Conditions III and a Department approved biosolids management plan.

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)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

Applicable ; This permittee has an approved pretreatment program in accordance with the requirements of [40 CFR Part 403] and [10 CSR 20-6.100] and is expected to implement and enforce its approved 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.

Applicable ; A RPA was conducted on appropriate parameters. Please see **APPENDIX – RPA RESULTS**.

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.

Applicable ; Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):

Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

- In accordance with Missouri RSMo §644.026.1(15) and 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.

Applicable ; Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C_e = \frac{(Q_e + Q_s)C - (C_s \times Q_s)}{(Q_e)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration

Cs = upstream concentration

Qs = upstream flow

Ce = effluent concentration

Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Number of Samples "n":

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency

does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For Total Ammonia as Nitrogen, “n = 30” is used.

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 ; A 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 facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility (industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
- Other – please justify.

40 CFR 122.41(M) - BYPASSES:

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

Not Applicable ; This facility does not anticipate bypassing.

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.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

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

Part VI – Effluent Limits Determination

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)]:

OUTFALL #001 – MAIN FACILITY OUTFALL

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*	No	*/*
CBOD ₅	mg/L	1		15	10	No	15/10
TSS	mg/L	1		20	15	No	20/15
pH	SU	1	6.5 – 9.0			No	6.5 – 9.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3, 5	3.7		1.9	No	3.7/1.9
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3, 5	7.5		3.7	No	7.5/3.7
Escherichia coli	***	1, 3		1030	206	No	1030/206
Oil & Grease (mg/L)	mg/L	1, 3	15		10	No	15/10
Aluminum, TR	µg/L	2, 3	*		*	No	*/*
Copper, TR	µg/L	2, 3	29.7		17.1	Yes	19.9/8.8
Lead, TR	µg/L	1, 3	13.1		8.8	Yes	10.2/4
Whole Effluent Toxicity (WET) Test	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

* - Monitoring requirement only.
 ** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
 *** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
 **** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

- 1. State or Federal Regulation/Law
- 2. Water Quality Standard (includes RPA)
- 3. Water Quality Based Effluent Limits
- 4. Lagoon Policy
- 5. Ammonia Policy
- 6. Antidegradation Review
- 7. Antidegradation Policy
- 8. Water Quality Model
- 9. Best Professional Judgment
- 10. TMDL or Permit in lieu of TMDL
- 11. WET Test Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Biochemical Oxygen Demand (BOD₅)**.

– Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.

- **Total Suspended Solids (TSS)**.

– Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.

- **pH**. Effluent limitations have been retained from previous state operating permit.

- **Total Ammonia Nitrogen**. Effluent limitations have been retained from previous state operating permit.

- **Escherichia coli (E. coli)**. Effluent limitations have been retained from previous state operating permit.

- **Oil & Grease**. Effluent limitations have been retained from previous state operating permit.

- **Metals**

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the “Technical Support Document For Water Quality-based Toxic Controls” (EPA/505/2-90-001) and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 241 mg/L is used in the conversion below as the facility provided the Department with a Hardness Study for the receiving stream.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Copper	0.960	0.960
Lead	0.6628	0.6628

Conversion factors for Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 241 mg/L.

- **Aluminum Toxic, Total Recoverable**. Monitoring Only requirement has been retained from previous state operating permit to see if the facility has a reasonable potential to violate Water Quality Standards.

- **Copper, Total Recoverable**. Protection of Aquatic Life Chronic Criteria = 19.0 µg/L, Acute Criteria = 30.77439 µg/L.

Chronic = $19.0/0.960 = 19.78 \mu\text{g/L}$
 Acute = $30.77349/0.960 = 32.0557 \mu\text{g/L}$

Chronic WLA: $C_e = ((2.325 + 0.0)19.78 - (0.0 * 0.0))/2.325$
 $C_e = 19.78 \mu\text{g/L}$

Acute WLA: $C_e = ((2.325 + 0.0)32.0557 - (0.0 * 0.0))/2.325$
 $C_e = 32.0557 \mu\text{g/L}$

$LTA_c = 19.78 (0.618) = 12.22 \mu\text{g/L}$ [CV = 0.44, 99th Percentile]
 $LTA_a = 32.0557 (0.411) = 13.17 \mu\text{g/L}$ [CV = 0.44, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = $12.22 (2.43) = 29.7 \mu\text{g/L}$ [CV = 0.44, 99th Percentile]
 AML = $12.22 (1.40) = 17.1 \mu\text{g/L}$ [CV = 0.44, 95th Percentile, n = 4]

- **Lead Toxic, Total Recoverable.** Protection of Aquatic Life Chronic Criteria = 6.463 µg/L, Acute Criteria = 165.746 µg/L.

Chronic = $6.463/0.6628 = 9.75 \mu\text{g/L}$
 Acute = $165.746/0.6628 = 250.06 \mu\text{g/L}$

Chronic WLA: $C_e = ((2.325 + 0.0)9.75 - (0.0 * 0.0))/2.325$
 $C_e = 9.75 \mu\text{g/L}$

Acute WLA: $C_e = ((2.325 + 0.0)250.06 - (0.0 * 0.0))/2.325$
 $C_e = 250.06 \mu\text{g/L}$

$LTA_c = 9.75 (0.7247) = 7.07 \mu\text{g/L}$ [CV = 0.29, 99th Percentile]
 $LTA_a = 250.06 (0.5406) = 135.2 \mu\text{g/L}$ [CV = 0.29, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = $7.07 (1.85) = 13.1 \mu\text{g/L}$ [CV = 0.29, 99th Percentile]
 AML = $7.07 (1.25) = 8.8 \mu\text{g/L}$ [CV = 0.29, 95th Percentile, n = 4]

- **WET Test.** WET Testing schedules and intervals are established in accordance with the Department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute

No less than ONCE/YEAR:

- Facility is designated as a Major facility or has a design flow ≥ 1.0 MGD.
- Facility continuously or routinely exceeds their design flow.
- Facility exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded.
- Facility has Water Quality-based effluent limitations for toxic substances (other than NH₃).

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/weekday	once/month
CBOD ₅	once/week	once/month
TSS	once/week	once/month
pH	once/week	once/month
Ammonia as N	once/week	once/month
Escherichia coli	once/week	once/month
Oil & Grease (mg/L)	once/month	once/month
Aluminum, TR	once/quarter	once/quarter
Copper, TR	once/quarter	once/quarter
Lead, TR	once/quarter	once/quarter

Sampling Frequency Justification:

Sampling and Reporting Frequency was retained from previous permit except for Oil & Grease which was reduced to once per month as the facility has not shown a potential to violate the Water Quality Standards.

Sampling Type Justification

As per 10 CSR 20-7.015, CBOD₅, TSS, and WET test samples collected for mechanical plants shall be a 24 hour composite sample. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and Oil & Grease. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia, and the fact that pH cannot be preserved and must be sampled in the field. As Ammonia and Oil & Grease samples must be immediately preserved with acid, these samples are to be collected as a grab.

Part VII – 2013 Water Quality Criteria for Ammonia

Upcoming changes to the Water Quality Standard for ammonia may require significant upgrades to wastewater treatment facilities.

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels. Missouri is home to 65 of North America's mussel species, spread across the state. According to the Missouri Department of Conservation nearly two-thirds are considered to be "of conservation concern". Nine are listed as federally endangered, with one more currently proposed as endangered and another proposed as threatened.

The adult forms of mussels seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. But very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, they will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA. However we will utilize any available flexibility based on actual species of mussels native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded so as to comply with the current water quality standards. But these new standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Current ammonia effluent limitations at your facility under the current water quality standard (WQS), are:

Summer – 3.7 mg/L daily maximum, 1.9 mg/L monthly average.
Winter – 7.5 mg/L daily maximum, 3.7 mg/L monthly average.

Under the new EPA criteria, where mussels are present or expected to be present, typical effluent limitations for your facility based on effluent data from the past 5 years would be:

Summer – 2.0 mg/L daily maximum, 0.6 mg/L monthly average.
Winter – 6.5 mg/L daily maximum, 2.1 mg/L monthly average.

Please note that the effluent limitations for Ammonia as N will be calculated at the time of permit renewal and will have additional data which will have the potential to change the final effluent limitations.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. It is expected that the new WQS will be adopted in the next review of our standards. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations.

For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

Part VIII – 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.

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

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 was from July 19, 2013 to August 19, 2013. 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. The facility requested that the CV value of 0.778 from the 2009 fact sheet be used to generate Total Recoverable Copper limitations and that the CV value of 1.043 from the 2009 fact sheet be used to generate Total Recoverable Lead limitations. The Department is required to use the most current data when calculating effluent limitations and the most current data set used in calculating the effluent limitations provided a CV value of 0.44 for TR Copper, and a CV value of 0.29 for TR Lead, which was used to determine limits. The Department cannot use the 2009 CV values as they are no longer valid.

DATE OF FACT SHEET: JUNE 13, 2013

UPDATED: OCTOBER 4, 2013

COMPLETED BY:

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Appendices

APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Copper, TR	32.1	48.05	19.8	48.05	55.00	32.6/4.9	0.44	1.47	YES
Lead, TR	250.1	19.45	9.8	19.45	55.00	15/2	0.29	1.30	YES

N/A – Not Applicable

* - Units are (µg/L) unless otherwise noted.

** - If the number of samples is 10 or greater, then the CV value must be used in the QBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the QBEL for the applicable constituent.

*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.

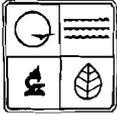
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
FORM B2 – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY

FACILITY NAME
 Warrensburg East Wastewater Treatment Plant

PERMIT NO. MO-0094579 COUNTY Johnson

APPLICATION OVERVIEW

Form B2 has been developed in a modular format and consists of Parts A, B and C and a Supplemental Application Information (Parts D, E, F and G) packet. All applicants must complete Parts A, B and C. Some applicants must also complete parts of the Supplemental Application Information packet. The following items explain which parts of Form B2 you must complete. Submittal of an incomplete application may result in the application being returned.

BASIC APPLICATION INFORMATION

- A. Basic Application Information for all Applicants. All applicants must complete Part A.
- B. Additional Application Information for all Applicants. All applicants must complete Part B.
- C. Certification. All applicants must complete Part C.

SUPPLEMENTAL APPLICATION INFORMATION

- D. Expanded Effluent Testing Data. A treatment works that discharges effluent to surface water of the United States and meets one or more of the following criteria must complete *Part D - Expanded Effluent Testing Data*:
 - 1. Has a design flow rate greater than or equal to 1 million gallons per day.
 - 2. Is required to have or currently has a pretreatment program.
 - 3. Is otherwise required by the permitting authority to provide the information.
- E. Toxicity Testing Data. A treatment works that meets one or more of the following criteria must complete *Part E - Toxicity Testing Data*:
 - 1. Has a design flow rate greater than or equal to 1 million gallons per day.
 - 2. Is required to have or currently has a pretreatment program.
 - 3. Is otherwise required by the permitting authority to provide the information.
- F. Industrial User Discharges and Resource Conservation and Recovery Act / Comprehensive Environmental Response, Compensation and Liability Act Wastes. A treatment works that accepts process wastewater from any significant industrial users, also known as SIUs, or receives a Resource Conservation and Recovery Act or CERCLA wastes must complete *Part F - Industrial User Discharges and Resource Conservation and Recovery Act /CERCLA Wastes*.

SIUs are defined as:

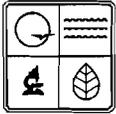
 - 1. All Categorical Industrial Users, or CIUs, subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations 403.6 and 40 Code of Federal Regulations 403.6 and 40 CFR Chapter 1, Subchapter N.
 - 2. Any other industrial user that meets one or more of the following:
 - i. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions).
 - ii. Contributes a process waste stream that makes up five percent or more of the average dry weather hydraulic or organic capacity of the treatment plant.
 - iii. Is designated as an SIU by the control authority.
- G. Combined Sewer Systems. A treatment works that has a combined sewer system must complete *Part G - Combined Sewer Systems*.

RECEIVED

APR 15 2013

WATER PROTECTION PROGRAM

ALL APPLICANTS MUST COMPLETE PARTS A, B and C



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
FORM B2 – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY

C11312
AP15151

FOR AGENCY USE ONLY	
CHECK NUMBER <u>083129</u>	
DATE RECEIVED <u>4/15/13</u>	FEE SUBMITTED <u>\$200.00</u>

PART A – BASIC APPLICATION INFORMATION

1. This application is for:

An operating permit and antidegradation review public notice.

A construction permit following an appropriate operating permit and antidegradation review public notice.

A construction permit, a concurrent operating permit and antidegradation review public notice.

A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).

An operating permit for a new or unpermitted facility. Construction Permit # _____

An operating permit renewal: Permit #MO- _____ Expiration Date _____

An operating permit modification: Permit #MO- 0094579 Reason: Modification of Metal Limitations

1.1 Is this a Federal/State Funded Project? Yes No Funding Agency/Project #: _____

1.2 Is the appropriate fee included with the application (See instructions for appropriate fee)? Yes No

2. FACILITY

NAME Warrensburg East Wastewater Treatment Plant		TELEPHONE NUMBER WITH AREA CODE 660-747-8714	
ADDRESS (PHYSICAL) 441 NE 300 Rd	CITY Warrensburg	STATE MO	ZIP 64093

2.1 LEGAL DESCRIPTION (Plant Site): NE ¼, SW ¼, ¼, Sec. 443, T 429, R 25W County Johnson

2.2 UTM Coordinates Easting (X): 443094 Northing (Y): 4295526
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3. OWNER

NAME City of Warrensburg		TITLE Continuing Authority		TELEPHONE NUMBER WITH AREA CODE 660-747-9131	
ADDRESS 102 S. Holden St.	CITY Warrensburg	STATE MO	ZIP 64093		

3.1 Request review of draft permit prior to Public Notice? Yes No

4. CONTINUING AUTHORITY: Permanent organization which will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME Same as above		CITY			
ADDRESS Same as above	CERTIFICATE NUMBER (IF APPLICABLE)		STATE	ZIP	

5. OPERATOR

NAME George Ballman		TITLE Operator III		TELEPHONE NUMBER WITH AREA CODE 660-747-8714	
------------------------	--	-----------------------	--	---	--

6. FACILITY CONTACT

NAME Joe Tilden		TITLE Manager of Operations Direct line 660-262-4710 /Cell 660-238-6161			
--------------------	--	--	--	--	--

MO 780-1805 (09-08)

FACILITY NAME Warrensburg East WWTP	PERMIT NO. MO- 0094579	OUTFALL NO. 001
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PART A – BASIC APPLICATION INFORMATION

7. ADDITIONAL FACILITY INFORMATION

7.1 BRIEF DESCRIPTION OF FACILITIES

Influent Pumping Station/ Bar Screen/ Aerated Grit Chamber/ Three (3) Sequencing Batch Reactors/ Effluent Pumping Station/ UV Disinfection/Four (4) Sludge Digester Basins/ Reed Beds/ Sludge is Land Applied

7.2 TOPOGRAPHIC MAP. ATTACH TO THIS APPLICATION A TOPOGRAPHIC MAP OF THE AREA EXTENDING AT LEAST ONE MILE BEYOND FACILITY PROPERTY BOUNDARIES. THIS MAP MUST SHOW THE OUTLINE OF THE FACILITY AND THE FOLLOWING INFORMATION. (YOU MAY SUBMIT MORE THAN ONE MAP IF ONE MAP DOES NOT SHOW THE ENTIRE AREA.)

- The area surrounding the treatment plant, including all unit processes.
- The location of the downstream landowner(s). (See Item 10.)
- The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
- The actual point of discharge.
- Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
- Any areas where the sewage sludge produced by the treatment works is stored, treated or disposed.
- If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act, or RCRA, by truck, rail or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored or disposed.

7.3 PROCESS FLOW DIAGRAM OR SCHEMATIC. PROVIDE A DIAGRAM SHOWING THE PROCESSES OF THE TREATMENT PLANT. ALSO, PROVIDE A WATER BALANCE SHOWING ALL TREATMENT UNITS, INCLUDING DISINFECTION (E.G. CHLORINATION AND DECHLORINATION). THE WATER BALANCE MUST SHOW DAILY AVERAGE FLOW RATES AT INFLUENT AND DISCHARGE POINTS AND APPROXIMATE DAILY FLOW RATES BETWEEN TREATMENT UNITS. INCLUDE A BRIEF NARRATIVE DESCRIPTION OF THE DIAGRAM.

7.4 FACILITY SIC CODE	DISCHARGE SIC CODE: 4952	FACILITY NAICS CODE:	DISCHARGE NAICS CODE: 2213
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7.5 NUMBER OF SEPARATE DISCHARGE POINTS
One (1)

7.6 NUMBER OF PEOPLE PRESENTLY CONNECTED OR POPULATION EQUIVALENT 10,628	DESIGN POPULATION EQUIVALENT 15,000
---	--

NUMBER OF UNITS PRESENTLY CONNECTED
 HOMES 2,712 APARTMENTS 350 TRAILERS 11 OTHER 4 Dormitories 1,300 PE

TOTAL DESIGN FLOW (ALL OUTFALLS) 1.5 MGD	ACTUAL FLOW 1.060 MGD
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7.7 DOES ANY BYPASSING OCCUR ANYWHERE IN THE COLLECTION SYSTEM OR AT THE TREATMENT FACILITY?
 Yes No (If Yes, attach an explanation.)

7.8 LENGTH OF THE SANITARY SEWER COLLECTION SYSTEM IN MILES
65

7.9 IS INDUSTRIAL WASTE DISCHARGED TO THE FACILITY IDENTIFIED IN ITEM 2? Yes No

7.10 WILL THE DISCHARGE BE CONTINUOUS THROUGH THE YEAR? Yes No

A. DISCHARGE WILL OCCUR DURING THE FOLLOWING MONTHS January through December	B. HOW MANY DAYS OF THE WEEK WILL THE DISCHARGE OCCUR? Seven (7)
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7.11 IS WASTEWATER LAND APPLIED? (If Yes, Attach Form I) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	7.12 DOES THIS FACILITY DISCHARGE TO A LOSING STREAM OR SINKHOLE? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
---	--

7.13 HAS A WASTE LOAD ALLOCATION STUDY BEEN COMPLETED FOR THIS FACILITY?
 Yes No

7.14 LIST ALL PERMIT VIOLATIONS, INCLUDING EFFLUENT LIMIT EXCEEDANCES IN THE LAST FIVE YEARS. ATTACH A SEPARATE SHEET IF NECESSARY. IF NONE, WRITE NONE.

8. LABORATORY CONTROL INFORMATION

8.1 LABORATORY WORK CONDUCTED BY PLANT PERSONNEL

Lab work conducted outside of plant.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Push-button or visual methods for simple test such as pH, settleable solids.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Additional procedures such as Dissolved Oxygen, Chemical Oxygen Demand, Biological Oxygen Demand, titrations, solids, volatile content.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

FACILITY NAME Warrensburg East WWTP	PERMIT NO. MO- 0094579	OUTFALL NO. 001
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PART A - BASIC APPLICATION INFORMATION

9. SLUDGE HANDLING, USE AND DISPOSAL

9.1 IS THE SLUDGE A HAZARDOUS WASTE AS DEFINED BY 10 CSR 25?
Yes No

9.2 SLUDGE PRODUCTION, INCLUDING SLUDGE RECEIVED FROM OTHERS
Design Dry Tons/Year 244 Actual Dry Tons/Year 189

9.3 CAPACITY OF SLUDGE HOLDING STRUCTURES

9.4 SLUDGE STORAGE PROVIDED
Cubic Feet ^{100,000} Days of Storage ¹²⁰ Average Percent Solids of Sludge ^{2%} No Sludge Storage is Provided

9.5 TYPE OF STORAGE
 Holding Tank Basin Building Concrete Pad Other (Describe) _____

9.6 SLUDGE TREATMENT
 Anaerobic Digester Storage Tank Lime Stabilization Lagoon
 Aerobic Digester Air or Heat Drying Composting Other (Attach Description)

9.7 SLUDGE USE OR DISPOSAL
 Land Application Contract Hauler Hauled to Another Treatment Facility Solid Waste Landfill
 Surface Disposal (Sludge Disposal Lagoon, Sludge Held For More Than Two Years) Incineration
 Other (Attach Explanation Sheet) X

9.8 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY

NAME City of Warrensburg Personnel			
ADDRESS 102 S. Holden St.	CITY Warrensburg	STATE MO	ZIP 64093
CONTACT PERSON Joe Tilden	TELEPHONE NUMBER WITH AREA CODE 660-262-4710	PERMIT NO. MO- 0094579	

9.9 SLUDGE USE OR DISPOSAL FACILITY

By Applicant By Others (Complete Below)

NAME Same as above			
ADDRESS Same as above	CITY Warrensburg	STATE Mo	ZIP 64093
CONTACT PERSON Same as above	TELEPHONE NUMBER WITH AREA CODE Same as above	PERMIT NO. MO- Same as above	

9.10 DO THE SLUDGE OR BIOSOLIDS DISPOSAL COMPLY WITH FEDERAL SLUDGE REGULATIONS UNDER 40 CFR 503?
 Yes No (Attach Explanation)

10. DOWNSTREAM LANDOWNER(S). (ATTACH ADDITIONAL SHEETS AS NECESSARY.)

NAME Don Boosinger			
ADDRESS 516 NE 350 RD	CITY Knob Noster	STATE Mo	ZIP 65336

11. DRINKING WATER SUPPLY INFORMATION

11.1 SOURCE OF YOUR DRINKING WATER SUPPLY

A. PUBLIC SUPPLY (MUNICIPAL OR WATER DISTRICT WATER) (IF PUBLIC, PLEASE GIVE NAME OF PUBLIC SUPPLY)
Missouri American Water Company.

B. PRIVATE WELL
NA

C. SURFACE WATER (LAKE, POND OR STREAM)
NA

11.2 DOES YOUR DRINKING WATER SOURCE SERVE AT LEAST 25 PEOPLE AT LEAST 60 DAYS PER YEAR (NOT NECESSARILY CONSECUTIVE DAYS)?
Yes No

11.3 DOES YOUR SUPPLY SERVE HOUSING THAT IS OCCUPIED YEAR ROUND BY THE SAME PEOPLE? THIS DOES NOT INCLUDE HOUSING THAT IS OCCUPIED SEASONALLY?
Yes No

END OF PART A

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL			
FACILITY NAME Warrensburg East WWTP		PERMIT NO. MO- 0094579	OUTFALL NO. 001
PART B – ADDITIONAL APPLICATION INFORMATION			
20. INFLOW AND INFILTRATION			
ESTIMATE THE AVERAGE NUMBER OF GALLONS PER DAY THAT FLOW INTO THE TREATMENT WORKS FROM INFLOW AND INFILTRATION. Gallons Per Day 150,000 GPD Daily Average / 5,000,000 GPD during a heavy rain event.			
BRIEFLY EXPLAIN ANY STEPS UNDERWAY OR PLANNED TO MINIMIZE INFLOW AND INFILTRATION. <u>Extensive visual inspections, tv inspections, smoke testing, repairs. and public education.</u>			
20.1 OPERATION AND MAINTENANCE PERFORMED BY CONTRACTOR(S)			
ARE ANY OPERATIONAL OR MAINTENANCE ASPECTS (RELATED TO WASTEWATER TREATMENT AND EFFLUENT QUALITY) OF THE TREATMENT WORKS THE RESPONSIBILITY OF A CONTRACTOR? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If Yes, list the name, address, telephone number and status of each contractor and describe the contractor's responsibilities. (Attach additional pages if necessary.)			
NAME NA			
MAILING ADDRESS			
TELEPHONE NUMBER WITH AREA CODE			
RESPONSIBILITIES OF CONTRACTOR			
20.2 SCHEDULED IMPROVEMENTS AND SCHEDULES OF IMPLEMENTATION. PROVIDE INFORMATION ABOUT ANY UNCOMPLETED IMPLEMENTATION SCHEDULE OR UNCOMPLETED PLANS FOR IMPROVEMENTS THAT WILL AFFECT THE WASTEWATER TREATMENT, EFFLUENT QUALITY OR DESIGN CAPACITY OF THE TREATMENT WORKS. IF THE TREATMENT WORKS HAS SEVERAL DIFFERENT IMPLEMENTATION SCHEDULES OR IS PLANNING SEVERAL IMPROVEMENTS, SUBMIT SEPARATE RESPONSES FOR EACH. (IF NONE, GO TO QUESTION B-20.3.)			
A. List the outfall number that is covered by this implementation schedule Outfall No. <u>NA</u>		B. Indicate whether the planned improvements or implementation schedule are required by local, state or federal agencies. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
20.3 WASTEWATER DISCHARGES: COMPLETE QUESTIONS 20.4 THROUGH 20.7 ONCE FOR EACH OUTFALL (INCLUDING BYPASS POINTS) THROUGH WHICH EFFLUENT IS DISCHARGED. DO NOT INCLUDE INFORMATION ON COMBINED SEWER OVERFLOWS IN THIS SECTION.			
20.4 DESCRIPTION OF OUTFALL			
OUTFALL NUMBER # <u>001</u>			
A. LOCATION ¼ <u>NE</u> ¼ <u>SW</u> Section <u>3</u> Township <u>46N</u> Range <u>25W</u> <input type="checkbox"/> E <input checked="" type="checkbox"/> W UTM Coordinates Easting (X): <u>443094</u> Northing (Y): <u>429526</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
B. Distance from Shore (If Applicable) <u>NA</u> ft.		C. Depth Below Surface (If Applicable) <u>NA</u> ft.	D. Average Daily Flow Rate <u>1.06</u> mgd
E. Does this outfall have either an intermittent or periodic discharge? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Provide the following information:			
Number of Days Per Year Discharge Occurs: <u>365</u>	Average Duration of Each Discharge: <u>20 min</u>	Average Flow Per Discharge: <u>0.09</u> mgd	Months in Which Discharge Occurs: <u>January thru December</u>
Is Outfall Equipped with a Diffuser? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
20.5 DESCRIPTION OF RECEIVING WATER			
B. Name of Receiving Water <u>Bear Creek</u>			
B. Name of Watershed (If Known)		U.S. Soil Conservation Service 14-Digit Watershed Code (If Known) <u>(10300104-050002)</u>	
B. Name of State Management/River Basin (If Known)		U.S. Geological Survey 8-Digit Hydrologic Cataloging Unit Code (If Known)	
B. Critical Flow of Receiving Stream (If Applicable) Acute <u> </u> cfs Chronic <u> </u> cfs		B. Total Hardness of Receiving Stream at Critical Low Flow (If Applicable) <u>241</u> mg/L of CaCO ₃	

FACILITY NAME Warrensburg East WWTP	PERMIT NO. MO- 0094579	OUTFALL NO. 001
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PART B – ADDITIONAL APPLICATION INFORMATION (CONTINUED)

20.6 DESCRIPTION OF TREATMENT

A. WHAT LEVELS OF TREATMENT ARE PROVIDED? Check All That Apply
 Primary Secondary Advanced Other (Describe)

B. INDICATE THE FOLLOWING REMOVAL RATES (AS APPLICABLE)
 Design BOD₅ Removal Or Design CBOD₅ Removal 85 % Design SS Removal 85 %
 Design P Removal % Design N Removal % Other %

C. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe:
 April 1st through October 31 st. Ultraviolet (UV) Disinfection

If disinfection is by chlorination, is dechlorination used for this outfall? Yes No

Does the treatment plant have post aeration? Yes No

20.7 EFFLUENT TESTING DATA. ALL APPLICANTS THAT DISCHARGE TO WATERS OF THE U.S. MUST PROVIDE EFFLUENT TESTING DATA FOR THE FOLLOWING PARAMETERS. PROVIDE THE INDICATED EFFLUENT DATA FOR EACH OUTFALL THROUGH WHICH EFFLUENT IS DISCHARGED. DO NOT INCLUDE INFORMATION OF COMBINED SEWER OVERFLOWS IN THIS SECTION. ALL INFORMATION REPORTED MUST BE BASED ON DATA COLLECTED THROUGH ANALYSIS CONDUCTED USING 40 CFR PART 136 METHODS. IN ADDITION, THIS DATA MUST COMPLY WITH QA/QC REQUIREMENTS OF 40 CFR PART 136 AND OTHER APPROPRIATE QA/QC REQUIREMENTS FOR STANDARD METHODS FOR ANALYTES NOT ADDRESSED BY 40 CFR PART 136.

OUTFALL NUMBER

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	VALUE	UNITS	VALUE	UNITS	NO. OF SAMPLES
pH (Minimum)	6.9	S.U.	7.2	S.U.	45
pH (Maximum)	7.4	S.U.	7.2	S.U.	45
FLOW RATE	5.0114	MGD	1.06	MGD	365
TEMPERATURE (Winter)	22.6	°C	17.1	°C	24
TEMPERATURE (Summer)	25.6	°C	22.4	°C	24

*For pH report a minimum and a maximum daily value.

POLLUTANT	MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
	CONC.	UNITS	CONC.	UNITS	NO. OF SAMPLES		

Conventional and Nonconventional Compounds

BIOCHEMICAL OXYGEN DEMAND (Report One)	BOD ₅	NA	mg/L	NA	mg/L	NA	5210b 20th ed.	NA
	CBOD ₅	7	mg/L	4.5	mg/L	16	9223 21st ed.	8
FECAL COLIFORM	65	#/100 mL	23.3	#/100 mL	3	2540D 18th ed.	400	
TOTAL SUSPENDED SOLIDS (TSS)	14	mg/L	9.5	mg/L	16	4500 20th ed.	30	
AMMONIA (AS N)	0.3	mg/L	0.1	mg/L	9	4500 20th ed.	1.3	
CHLORINE (TOTAL RESIDUAL, TRC)	0.1	mg/L	0.1	mg/L	1	1500-CI G		
DISSOLVED OXYGEN	8.9	mg/L	7.3	mg/L	39	4500-D 21st ed.		
TOTAL KJELDAHL NITROGEN (TKN)	5.6	mg/L	5.6	mg/L	1	4500-Norg		
NITRATE PLUS NITRITE NITROGEN	1.292	mg/L	1.292	mg/L	1	4500-NO2-B		
OIL AND GREASE	1.0	mg/L	0.5	mg/L	9	EPA 1664A	10	
PHOSPHORUS (TOTAL)	1.60	mg/L	1.60	mg/L	1	4500-P B,E		
TOTAL DISSOLVE SOLIDS (TDS)	607	mg/L	607	mg/L	1	2510 C		
OTHER <i>E-Coli</i>	29	mg/L	8	mg/L	9	9223 21st ed.	206	

END OF PART B

PART C - CERTIFICATION

30. CERTIFICATION

All applicants must complete the Certification Section. This certification must be signed by an officer of the company or city official. All applicants must complete all applicable sections as explained in the Application Overview. By signing this certification statement, applicants confirm that they have reviewed the entire form and have completed all sections that apply to the facility for which this application is submitted.

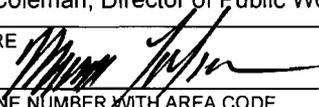
ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PRINTED NAME AND OFFICIAL TITLE (MUST BE AN OFFICER OF THE COMPANY OR CITY OFFICIAL)

Marvin Coleman, Director of Public Works

SIGNATURE



TELEPHONE NUMBER WITH AREA CODE

660-262-4660

DATE SIGNED

4-10-13

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

For Design Flows Less than 1 Million Gallons Per Day,
Send Completed Form to:

Appropriate Regional Office

Map of regional offices with addresses and phone numbers is available on the Web at www.dnr.mo.gov/regions/ro-map.pdf.

For Design Flows of 1 Million Gallons Per Day or Greater,
Send Completed Form to:

Department of Natural Resources
Water Protection Program
ATTN: NPDES Permits and Engineering Section
P.O. Box 176
Jefferson City, MO 65102

END OF PART C.

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

Do not complete the remainder of this application, unless:

1. Your facility design flow is equal to or greater than 1,000,000 gallons per day.
2. Your facility is a pretreatment treatment works.
3. Your facility is a combined sewer system.

Submittal of an incomplete application may result in the application being returned. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME Warrensburg East WWTP	PERMIT NO. MO- 0094579	OUTFALL NO. 001
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PART D – EXPANDED EFFLUENT TESTING DATA

40. EXPANDED EFFLUENT TESTING DATA

Refer to the supplemental application information to determine whether Part D applies to the treatment works.

40.1 EFFLUENT TESTING: IF THE TREATMENT WORKS HAS A DESIGN FLOW GREATER THAN OR EQUAL TO 1 MILLION GALLONS PER DAY OR IT HAS (OR IS REQUIRED TO HAVE) A PRETREATMENT PROGRAM, OR IS OTHERWISE REQUIRED BY THE PERMITTING AUTHORITY TO PROVIDE THE DATA, THEN PROVIDE EFFLUENT TESTING DATA FOR THE FOLLOWING POLLUTANTS. PROVIDE THE INDICATED EFFLUENT TESTING INFORMATION FOR EACH OUTFALL THROUGH WHICH EFFLUENT IS DISCHARGED. DO NOT INCLUDE INFORMATION ON COMBINED SEWER OVERFLOWS IN THIS SECTION. ALL INFORMATION REPORTED MUST BE BASED ON DATA COLLECTED THROUGH ANALYSIS CONDUCTED USING 40 CFR PART 136 METHODS. IN ADDITION, THIS DATA MUST COMPLY WITH QA/QC REQUIREMENTS OF 40 CFR PART 136 AND OTHER APPROPRIATE QA/QC REQUIREMENTS FOR STANDARD METHODS FOR ANALYTES NOT ADDRESSED BY 40 CFR PART 136. INDICATE IN THE BLANK ROWS PROVIDED BELOW ANY DATA YOU MAY HAVE ON POLLUTANTS NOT SPECIFICALLY LISTED IN THIS FORM. EFFLUENT TESTING MUST NOT BE MORE THAN FOUR AND ONE-HALF YEARS OLD.

OUTFALL NUMBER (Complete Once for Each Outfall Discharging Effluent to Waters of the State.)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	CONC	UNITS	MASS	UNITS	CONC	UNITS	MASS	UNITS	NO. OF SAMPLES		

METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS AND HARDNESS

ANTIMONY	<50	ug/l	<947	grams	<50	ug/l	<200	grams	1	6020	ML
ARSENIC	<5	ug/l	<95	g	<5	ug/l	<20	g	1	6020	ML
BERYLLIUM	<50	ug/l	<947	g	<50	ug/l	<200	g	1	6020	ML
CADMIUM	<5	ug/l	<95	g	<5	ug/l	<20	g	1	6020	ML
CHROMIUM	<10	ug/l	<189	g	<10	ug/l	<40	g	1	6020	ML
COPPER	11	ug/l	208	g	11	ug/l	44	g	1	6020	
LEAD	<5	ug/l	<95	g	<5	ug/l	<20	g	1	6020	ML
MERCURY	<0.5	ug/l	<9.5	g	<0.5	ug/l	<2.0	g	1	3112 B	ML
NICKEL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	6020	ML
SELENIUM	<5	ug/l	<95	g	<5	ug/l	<20	g	1	6020	ML
SILVER	<3	ug/l	<57	g	<3	ug/l	<12	g	1	6020	ML
THALLIUM	<100	ug/l	<1894	g	<100	ug/l	<401	g	1	6020	ML
ZINC	42	ug/l	796	g	42	ug/l	168	g	1	6020	
CYANIDE	<4	ug/l	<76	g	<4	ug/l	<16	g	1	4500-Cn E	ML
TOTAL PHENOLIC COMPOUNDS	<0.005	mg/l	<95	g	<0.005	mg/l	<20	g	1	5530 B,C	ML
HARDNESS (as CaCO ₃)	280	mg/l		g	280	mg/l		g	1	2340 B	

USE THIS SPACE (OR A SEPARATE SHEET) TO PROVIDE INFORMATION ON OTHER METALS REQUESTED BY THE PERMIT WRITER.

ALUMINUM	<200	ug/l	<3789	g	<200	ug/l	<801	g	5	6020	ML

FACILITY NAME Warrensburg East WWTP				PERMIT NO. MO- 0094579				OUTFALL NO. 001			
PART D – EXPANDED EFFLUENT TESTING DATA (CONTINUED)											
40.1 EXPANDED EFFLUENT TESTING DATA (CONTINUED)											
Complete Once for Each Outfall Discharging Effluent to Waters of the State.											
POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	CONC	UNITS	MASS	UNITS	CONC	UNITS	MASS	UNITS	NO. OF SAMPLES		
VOLATILE ORGANIC COMPOUNDS											
ACROLEIN	<50	ug/l	<947	grams	<50	ug/l	<200	grams	1	EPA 624	ML
ACRYLONITRILE	<50	ug/l	<947	g	<50	ug/l	<200	g	1	EPA 624	ML
BENZENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
BROMOFORM	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
CARBON TETRACHLORIDE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
CHLOROBENZENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
CHLORODIBROMO-METHANE	"note"										
CHLOROETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
2-CHLORO-ETHYLVINYL ETHER	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
CHLOROFORM	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
DICHLOROBROMO-METHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,1-DICHLORO-ETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,2-DICHLORO-ETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
TRANS-1,2-DICHLOROETHYLENE	<20	ug/l	<379	g	<20	ug/l	<80	g	1	EPA 624	ML
1,1-DICHLORO-ETHYLENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,2-DICHLORO-PROPANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,3-DICHLORO-PROPYLENE	"note"										
ETHYLBENZENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
METHYL BROMIDE	"note"										
METHYL CHLORIDE	"note"										
METHYLENE CHLORIDE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,1,2,2-TETRACHLOROETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
TETRACHLORO-ETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
TOLUENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
3,4-BENZO-FLUORANTHENE	"note"			g							
BENZO(GH) PHERYLENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
BENZO(K) FLUORANTHENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML

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PART D – EXPANDED EFFLUENT TESTING DATA (CONTINUED)

40.1 EXPANDED EFFLUENT TESTING DATA (CONTINUED)

Complete Once for Each Outfall Discharging Effluent to Waters of the State.

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	CONC	UNITS	MASS	UNITS	CONC	UNITS	MASS	UNITS	NO. OF SAMPLES		
BIS (2-CHLOROTHOXY) METHANE	<11	ug/l	<208	grams	<11	ug/l	<44	grams	1	EPA 625	ML
BIS (2-CHLOROETHYL) – ETHER	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
BIS (2-ETHYLHEXYL) PHTHALATE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
4-BROMOPHENYL PHENYL ETHER	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
BUTYL BENZYL PHTHALATE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
2-CHLORONAPH-THALENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
4-CHLORPHENYL PHENYL ETHER	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
CHRYSENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
DI-N-BUTYL PHTHALATE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
DEBENZO (A,H) ANTHRACENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
1,2-DICHLORO-BENZENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,3-DICHLORO-BENZENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,4-DICHLORO-BENZENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
3,3-DICHLORO-BENZIDINE	<21	ug/l	<398	g	<21	ug/l	<84	g	1	EPA 625	ML
DIETHYL PHTHALATE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
DIMETHYL PHTHALATE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
2,4-DINITRO-TOLUENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
2,6-DINITRO-TOLUENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
1,2-DIPHENYL-HYDRAZINE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	ML
1,1,1-TRICHLORO-ETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
1,1,2-TRICHLORO-ETHANE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
TRICHLORETHYLENE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML
VINYL CHLORIDE	<5.0	ug/l	<95	g	<5.0	ug/l	<20	g	1	EPA 624	ML

USE THIS SPACE (OR A SEPARATE SHEET) TO PROVIDE INFORMATION ON OTHER VOLATILE ORGANIC COMPOUNDS REQUESTED BY THE PERMIT WRITER

MO 780-1805 (09-08)

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PART D – EXPANDED EFFLUENT TESTING DATA (CONTINUED)

40.1 EXPANDED EFFLUENT TESTING DATA (CONTINUED)

POLLUTANT	MAXIMUM DAILY DISCHARGE				AVERAGE DAILY DISCHARGE					ANALYTICAL METHOD	ML/MDL
	CONC	UNITS	MASS	UNITS	CONC	UNITS	MASS	UNITS	NO. OF SAMPLES		
BASE-NEUTRAL COMPOUNDS											
ACENAPHTHENE	<11	ug/l	<208	grams	<11	ug/l	<44	grams	1	EPA 625	11
ACENAPHTHYLENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
ANTHRACENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
BENZIDINE	<84	ug/l	<1591	g	<84	ug/l	<337	g	1	EPA 625	84
BENZO(A)ANTHRACENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
BENZO(A)PYRENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
FLUORANTHENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
FLUORENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
HEXACHLOROBENZENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
HEXACHLOROCYCLO-PENTADIENE	<53	ug/l	<1004	g	<53	ug/l	<212	g	1	EPA 625	53
HEXACHLOROETHANE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
INDENO (1,2,3-CD) PYRENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
ISOPHORONE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
NAPHTHALENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
NITROBENZENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
N-NITROSODI-PROPYLAMINE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
N-NITROSODI-METHYLAMINE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
N-NITROSODI-PHENYLAMINE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
PHENANTHRENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
PYRENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11
1,2,4-TRICHLOROBENZENE	<11	ug/l	<208	g	<11	ug/l	<44	g	1	EPA 625	11

USE THIS SPACE (OR SEPARATE SHEET) TO PROVIDE INFORMATION ON OTHER BASE-NEUTRAL COMPOUNDS REQUESTED BY THE PERMIT WRITER.

END OF PART D
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

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PART E – TOXICITY TESTING DATA

50. TOXICITY TESTING DATA

Refer to the Supplemental Application Information to determine whether Part E applies to the treatment works.

Publicly owned treatment works, or POTWS, meeting one or more of the following criteria must provide the results of whole effluent toxicity tests for acute or chronic toxicity for each of the facility's discharge points.

- A. POTWS with a design flow rate greater than or equal to 1 million gallons per day.
- B. POTWS with a pretreatment program (or those that are required to have one under 40 CFR Part 403).
- C. POTWS required by the permitting authority to submit data for these parameters
 - ◆ At a minimum, these results must include quarterly testing for a 12-month period within the past one year using multiple species (minimum of two species), or the results from four tests performed at least annually in the four and one-half years prior to the application, provided the results show no appreciable toxicity, and testing for acute or chronic toxicity, depending on the range of receiving water dilution. Do not include information about combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136.
 - ◆ If EPA methods were not used, report the reason for using alternative methods. If test summaries are available that contain all of the information requested below, they may be submitted in place of Part E. If no biomonitoring data is required, do not complete Part E. Refer to the application overview for directions on which other sections of the form to complete.

50.1 REQUIRED TESTS. INDICATE THE NUMBER OF WHOLE EFFLUENT TOXICITY TESTS CONDUCTED IN THE PAST FOUR AND ONE-HALF YEARS.

CHRONIC	ACUTE 4
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INDIVIDUAL TEST DATA. Complete the following chart for the last three whole effluent toxicity tests. Allow one column per test (where each species constitutes a test). Copy this page if more than three tests are being reported.

	MOST RECENT	2 ND MOST RECENT	3 RD MOST RECENT
A. TEST INFORMATION			
TEST NUMBER	1206046	1106101-01	1006057-01
TEST SPECIES AND TEST METHOD NUMBER	EPA-821-R-02-012	EPA-821-R-02-012	EPA-821-R-02-012
AGE AT INITIATION OF TEST	<24hrs / 9 days	<24hrs / 9 days	<24hrs / 9 days
OUTFALL NUMBER	001	001	001
DATES SAMPLE COLLECTED	6-5-12	6-8-11	6-8-10
DATE TEST STARTED	6-6-12	6-9-11	6-9-10
DURATION	48hrs / 48hrs	48hrs / 48hrs	48hrs / 48hrs
B. GIVE TOXICITY TEST METHODS FOLLOWED			
MANUAL TITLE	Methodes measuring acute	Methodes measuring acute	Methodes measuring acute
EDITION NUMBER AND YEAR OF PUBLICATION	5th 2002	5th 2002	5th 2002
PAGE NUMBER(S)			
C. GIVE THE SAMPLE COLLECTION METHOD(S) USED. FOR MULTIPLE GRAB SAMPLES, INDICATE THE NUMBER OF GRAB SAMPLES USED.			
24-HOUR COMPOSITE	X	X	X
GRAB			
D. INDICATE WHERE THE SAMPLE WAS TAKEN IN RELATION TO DISINFECTION. (CHECK ALL THAT APPLY FOR EACH)			
BEFORE DISINFECTION	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
AFTER DISINFECTION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AFTER DECHLORINATION	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. DESCRIBE THE POINT IN THE TREATMENT PROCESS AT WHICH THE SAMPLE WAS COLLECTED			
SAMPLE WAS COLLECTED	After disinfection in UV chan	After disinfection in UV chan	In Effluent weir channel
F. FOR EACH TEST, INCLUDE WHETHER THE TEST WAS INTENDED TO ASSESS CHRONIC TOXICITY, ACUTE TOXICITY OR BOTH.			
CHRONIC TOXICITY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACUTE TOXICITY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G. PROVIDE THE TYPE OF TEST PERFORMED			
STATIC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
STATIC STATIC-RENEWAL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FLOW-THROUGH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. SOURCE OF DILUTION WATER. IF LABORATORY WATER, SPECIFY TYPE; IF RECEIVING WATER, SPECIFY SOURCE			
LABORATORY WATER			
RECEIVING WATER	X	X	X

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PART E - TOXICITY TESTING DATA (CONTINUED)

50.1 WHOLE EFFLUENT TOXICITY TESTS DATA (CONTINUED)

	MOST RECENT	2 ND MOST RECENT	3 RD MOST RECENT
I. TYPE OF DILUTION WATER, IF SALT WATER, SPECIFY "NATURAL" OR TYPE OF ARTIFICIAL SEA SALTS OR BRINE USED.			
FRESH WATER	Receiving water	Natural	Natural
SALT WATER			
J. GIVE THE PERCENTAGE EFFLUENT USED FOR ALL CONCENTRATIONS IN THE TEST SERIES.			
	6.25, 12.5, 25, 50 & 100%	100%	6.25, 12.5, 25, 50 & 100%
K. PARAMETERS MEASURED DURING THE TEST. (STATE WHETHER PARAMETER MEETS TEST METHOD SPECIFICATIONS)			
pH	7.81	7.83	7.82
SALINITY	3.28	3.25	3.29
TEMPERATURE	25.0	25.2	24.2
AMMONIA	N/A	N/A	N/A
DISSOLVED OXYGEN	9.5	9.0	8.0

L. TEST RESULTS

ACUTE:

PERCENT IN SURVIVAL IN 100% EFFLUENT	100%	100%	100%
LC ₅₀	100%	100%	100%
95% C.I.			
CONTROL PERCENT SURVIVAL	100%	100%	100%
OTHER (DESCRIBE)			

CHRONIC:

NOEC			
IC ₂₅			
CONTROL PERCENT SURVIVAL			
OTHER (DESCRIBE)			

M. QUALITY CONTROL ASSURANCE

IS REFERENCE TOXICANT DATA AVAILABLE?	Yes	Yes	Yes
WAS REFERENCE TOXICANT TEST WITHIN ACCEPTABLE BOUNDS?	Yes	Yes	Yes
WHAT DATE WAS REFERENCED TOXICANT TEST RUN (MM/DD/YYYY)?	4-23-12	5-7-11	5-12-10
OTHER (DESCRIBE)			

50.2 TOXICITY REDUCTION EVALUATION

Is the treatment works involved in a toxicity reduction evaluation? Yes No
 If yes, describe:

50.3 SUMMARY OF SUBMITTED BIOMONITORING TEST INFORMATION

If you have submitted biomonitoring test information, or information regarding the cause of toxicity, within the past four and one-half years, provide the dates the information was submitted to the permitting authority and a summary of the results.

Date Submitted (MM/DD/YYYY)

Summary of Results (See Instructions)

NA

END OF PART E

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.			
FACILITY NAME Warrensburg East WWTP		PERMIT NO. MO- 0094579	OUTFALL NO. 001
PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES			
60. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES			
Refer to the Supplemental Application Information to determine whether Part F applies to the treatment works.			
All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete this form.			
GENERAL INFORMATION			
60.1 PRETREATMENT PROGRAM			
Does the treatment works have, or is it subject to, an approved pretreatment program?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
60.2 NUMBER OF NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS, or SIUs AND CATEGORICAL INDUSTRIAL USERS, or CIUs. PROVIDE THE NUMBER OF EACH OF THE FOLLOWING TYPES OF INDUSTRIAL USERS THAT DISCHARGE TO THE TREATMENT WORKS.			
A.	Number of Non-Categorical SIUs Zero (0)	B.	Number of CIUs Two (2)
60.3 SIGNIFICANT INDUSTRIAL USER INFORMATION			
Supply the following information for each SIU. If more than one SIU discharges to the treatment works, provide the information requested for each. Submit additional pages as necessary.			
NAME Stahl Speciality Company			
MAILING ADDRESS 1303 Stahl Drive		CITY Warrensburg	STATE MO
		ZIP 64093	
60.4 INDUSTRIAL PROCESSES			
DESCRIBE ALL OF THE INDUSTRIAL PROCESSES THAT AFFECT OR CONTRIBUTE TO THE SIU'S DISCHARGE. Aluminum Foundry and Heat Treatment			
60.5 PRINCIPAL PRODUCT(S) AND RAW MATERIAL (S)			
Describe all of the principle processes and raw materials that affect or contribute to the SIU's discharge.			
PRINCIPAL PRODUCT(S) Aluminum Casting			
RAW MATERIAL(S) Aluminum			
60.6 FLOW RATE			
A.	PROCESS WASTEWATER FLOW RATE. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent. 7,500gpd <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent		
B.	NON-PROCESS WASTEWATER FLOW RATE. Indicate the average daily volume of non-process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.		
C.	2,000 gpd <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent		
60.7 PRETREATMENT STANDARDS			
Indicate whether the SIU is subject to the following			
A.	Local Limits	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
B.	Categorical Pretreatment Standards	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If subject to categorical pretreatment standards, which category and subcategory? 40 CFR Part 464 Subpart A			
60.8 PROBLEMS AT THE TREATMENT WORKS ATTRIBUTED TO WASTE DISCHARGED BY THE SIU			
Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, describe each episode			

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.			
FACILITY NAME Warrensburg East WWTP		PERMIT NO. MO- 0094579	OUTFALL NO. 001
PART F - INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES			
60. INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES			
Refer to the Supplemental Application Information to determine whether Part F applies to the treatment works.			
All treatment works receiving discharges from significant industrial users or which receive RCRA, CERCLA, or other remedial wastes must complete this form.			
GENERAL INFORMATION			
60.1 PRETREATMENT PROGRAM			
Does the treatment works have, or is it subject to, an approved pretreatment program?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
60.2 NUMBER OF NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS, or SIUs AND CATEGORICAL INDUSTRIAL USERS, or CIUs. PROVIDE THE NUMBER OF EACH OF THE FOLLOWING TYPES OF INDUSTRIAL USERS THAT DISCHARGE TO THE TREATMENT WORKS.			
A. Number of Non-Categorical SIUs Zero (0)	B. Number of CIUs Two (2)		
60.3 SIGNIFICANT INDUSTRIAL USER INFORMATION			
Supply the following information for each SIU. If more than one SIU discharges to the treatment works, provide the information requested for each. Submit additional pages as necessary.			
NAME EnerSys Energy Products Inc.			
MAILING ADDRESS 617 Ridgeview Dr.		CITY Warrensburg	STATE MO
		ZIP 64093	
60.4 INDUSTRIAL PROCESSES			
DESCRIBE ALL OF THE INDUSTRIAL PROCESSES THAT AFFECT OR CONTRIBUTE TO THE SIU'S DISCHARGE. Lead-Acid Battery Manufacture			
60.5 PRINCIPAL PRODUCT(S) AND RAW MATERIAL (S)			
Describe all of the principle processes and raw materials that affect or contribute to the SIU's discharge.			
PRINCIPAL PRODUCT(S) Lead-Acid Battery			
RAW MATERIAL(S) Sulfuric acid, Lead, Naphtha oil, Hydrochloric acid, Sodium hydroxide, Sodium hypochlorite, Ferrous Chloride and Methl			
60.6 FLOW RATE			
A. PROCESS WASTEWATER FLOW RATE. Indicate the average daily volume of process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.			
8,300 gpd <input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent			
B. NON-PROCESS WASTEWATER FLOW RATE. Indicate the average daily volume of non-process wastewater discharged into the collection system in gallons per day, or gpd, and whether the discharge is continuous or intermittent.			
C. 5,800 gpd <input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent			
60.7 PRETREATMENT STANDARDS			
Indicate whether the SIU is subject to the following			
A. Local Limits	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
B. Categorical Pretreatment Standards	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
If subject to categorical pretreatment standards, which category and subcategory? 40 CFR Part 461 Subpart C			
60.8 PROBLEMS AT THE TREATMENT WORKS ATTRIBUTED TO WASTE DISCHARGED BY THE SIU			
Has the SIU caused or contributed to any problems (e.g., upsets, interference) at the treatment works in the past three years?			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, describe each episode			

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

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PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES (CONTINUED)

60.9 RCRA HAZARDOUS WASTE RECEIVED BY TRUCK, RAIL, OR DEDICATED PIPELINE

RCRA WASTE. Does the treatment works receive or has it in the past three years received RCRA hazardous waste by truck, rail or dedicated pipe?
 Yes No

WASTE TRANSPORT. Method by which RCRA waste is received. (Check all that apply)
 Truck Rail Dedicated Pipe

WASTE DESCRIPTION. Give EPA hazardous waste number and amount (volume or mass, specify units).

EPA HAZARDOUS WASTE NUMBER	AMOUNT	UNITS
NA	NA	NA

60.10 CERCLA, OR SUPERFUND, WASTEWATER, RCRA REMEDIATION/CORRECTIVE ACTION WASTEWATER AND OTHER REMEDIAL ACTIVITY WASTEWATER

REMEDIAL WASTE. Does the treatment works currently (or has it been notified that it will) receive waste from remedial activities?
 Yes No Provide a list of sites and the requested information for each current and future site.

60.11 WASTE ORIGIN

Describe the site and type of facility at which the CERCLA/RCRA/or other remedial waste originates (or is expected to originate in the next five years).
NA

60.12 POLLUTANTS

List the hazardous constituents that are received (or are expected to be received). Included data on volume and concentration, if known. (Attach additional sheets if necessary)
NA

60.13 WASTE TREATMENT

A. Is this waste treated (or will it be treated) prior to entering the treatment works?
 Yes No

If Yes, describe the treatment (provide information about the removal efficiency):
NA

B. Is the discharge (or will the discharge be) continuous or intermittent?
 Continuous Intermittent

If intermittent, describe the discharge schedule:
NA

END OF PART F

REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.		
FACILITY NAME Warrensburg NA	PERMIT NO. MO-	OUTFALL NO.
PART G – COMBINED SEWER SYSTEMS		
70. COMBINED SEWER SYSTEMS (COMPLETE THIS PART IF THE TREATMENT WORKS HAS A COMBINED SEWER SYSTEM.)		
Refer to the Supplemental Application Information to determine whether Part G applies to the treatment works.		
70.1 SYSTEM MAP		
Provide a map indicating the following: (May be included with basic application information.)		
A. All CSO Discharges.		
B. Sensitive Use Areas Potentially Affected by CSOs. (e.g., beaches, drinking water supplies, shellfish beds, sensitive aquatic ecosystems and Outstanding Natural Resource Waters.)		
C. Waters that Support Threatened and Endangered Species Potentially Affected by CSOs.		
70.2 SYSTEM DIAGRAM		
Provide a diagram, either in the map provided above or on a separate drawing, of the Combined Sewer Collection System that includes the following information:		
A. Locations of Major Sewer Trunk Lines, Both Combined and Separate Sanitary.		
B. Locations of Points where Separate Sanitary Sewers Feed into the Combined Sewer System.		
C. Locations of In-Line or Off-Line Storage Structures.		
D. Locations of Flow-Regulating Devices.		
E. Locations of Pump Stations.		
70.3 PERCENT OF COLLECTION SYSTEM THAT IS COMBINED SEWER		
70.4 POPULATION SERVED BY COMBINED SEWER COLLECTION SYSTEM		
70.5 NAME OF ANY SATELLITE COMMUNITY WITH COMBINED SEWER COLLECTION SYSTEM		
70.6 CSO OUTFALLS. COMPLETE THE FOLLOWING ONCE FOR EACH CSO DISCHARGE POINT		
70.7 DESCRIPTION OF OUTFALL		
A. Outfall Number		
B. Location		
C. Distance from Shore (if applicable) _____ ft		D. Depth Below Surface (if applicable) _____ ft
E. Which of the following were monitored during the last year for this CSO? <input type="checkbox"/> Rainfall <input type="checkbox"/> CSO Pollutant Concentrations <input type="checkbox"/> CSO <input type="checkbox"/> CSO Flow Volume <input type="checkbox"/> Receiving Water Quality		
F. How many storm events were monitored last year?		
70.8 CSO EVENTS		
A. Give the Number of CSO Events in the Last Year _____ Events <input type="checkbox"/> Actual <input type="checkbox"/> Approximate		B. Give the Average Duration Per CSO Event _____ Hours <input type="checkbox"/> Actual <input type="checkbox"/> Approximate
C. Give the Average Volume Per CSO Event _____ Million Gallons <input type="checkbox"/> Actual <input type="checkbox"/> Approximate		D. GIVE THE MINIMUM RAINFALL THAT CAUSED A CSO EVENT IN THE LAST YEAR _____ INCHES OF RAINFALL
70.9 DESCRIPTION OF RECEIVING WATERS		
A. Name of Receiving Water		
B. Name of Watershed/River/Stream System		U.S. Soil Conservation Service 14-Digit Watershed Code (If Known)
Name of State Management/River Basin		U.S. Geological Survey 8- Digit Hydrologic Cataloging Unit Code (If Known)
70.10 CSO OPERATIONS		
Describe any known water quality impacts on the receiving water caused by this CSO (e.g., permanent or intermittent beach closings, permanent or intermittent shellfish bed closings, fish kills, fish advisories, other recreational loss, or violation of any applicable state water quality standard.)		
END OF PART G.		
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.		

INSTRUCTIONS FOR COMPLETING FORM B2
APPLICATION FOR CONSTRUCTION OR OPERATING PERMITS FOR FACILITIES WHICH RECEIVE
BASICALLY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY
(Facilities less than or equal to 100,000 gallons per day of domestic waste must use FORM B.)
(Facilities that receive wastes other than domestic must fill out FORM A and other forms as appropriate.)

PART A – BASIC APPLICATION INFORMATION

1. Check which parameter is applicable. **Do not check more than one item.** Construction and operating permit refer to permits issued by the Department of Natural Resources, Water Protection Program, Water Pollution Branch.

Effective Sept. 1, 2008, a facility will be required to use **MISSOURI'S ANTIDegradation Rule and Implementation Procedure**. For more information, this document is available at www.dnr.mo.gov/env/wpp/docs/aip-cwc-appr-050708.pdf. This procedure will be applicable to new and expanded wastewater facilities and requires the proposed discharge to a water body to undergo a level of Antidegradation Review that documents the use of a water body's available assimilative capacity is justified.

1.1 Self – explanatory.

1.2 An operating permit and antidegradation review public notice requires a Water Quality/Antidegradation Review Sheet to be submitted with the application (No fee required).

CONSTRUCTION PERMIT FEES (Include fee with application.)

\$750 for a sewage treatment facility with a design flow of less than 500,000 gallons per day.

\$2,200 for sewage treatment facility with a design flow of 500,000 gallons per day or more.

DOMESTIC OPERATING PERMIT FEES (Annual operating permit fees are based on flow.)

Annual fee/Design flow

\$3,000.....30,000 gpd to 1 mgd

Annual fee/Design flow

\$3,500.....>1 million gallons per day

New domestic wastewater treatment facilities must submit the annual fee with the original application.

If the application is for a site-specific permit re-issuance, send no fees. You will be invoiced separately by the department on the anniversary date of the original permit. Permit fees must be current for the department to reissue the operating permit. Late fees of two percent per month are charged and added to outstanding annual fees.

PUBLIC SEWER SYSTEM OPERATING PERMIT FEES (City, Public Sewer District, Public Water District, or other publicly owned treatment works). Annual fee is based on number of service connections. The table of fees is in 10 CSR 20-6.011 and is available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf. New Public Sewer System facilities should not submit any fee as the department will invoice the permittee.

OPERATING PERMIT MODIFICATIONS, including transfers, are subject to the following fees:

a. Municipals - \$200 each.

b. All others – 25 percent of annual fee.

Note: Facility name or address changes where owner, operator and continuing authority remain the same are not considered transfers.

2. Name of Facility – Include the name by which this facility is locally known. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Provide the street address or location of the facility. If the facility lacks a street name or route number, provide the names of the closest intersection, highway, country road, etc.

2.1 Self – explanatory.

2.2 Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates; the department's mapping system is available at www.dnr.mo.gov/internetmapviewer/.

3. Owner – Provide the legal name and address of the owner.

3.1 Prior to submitting a permit to public notice, the Department of Natural Resources shall provide the permit applicant 10 days to review the draft permit for nonsubstantive drafting errors. In the interest of expediting permit issuance, permit applicants may waive the opportunity to review draft permits prior to public notice. Check Yes to review the draft permit prior to public notice. Check No to waive the process and expedite the permit.

4. Continuing Authority – Provide the permanent organization, which will serve as the continuing authority for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf or contact the appropriate Department of Natural Resources Regional Office.

5. Operator – Provide the name, certificate number and telephone number of the operator of the facility.

6. Provide the name, title and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by the department, if necessary.

7.1 Provide a brief description of the wastewater treatment facilities.

7.2 A topographic map is available on the Web at www.dnr.mo.gov/internetmapviewer/ or from the Department of Natural Resources' Division of Geology and Land Survey in Rolla, Missouri at 573-368-2125.

7.3 Self – explanatory.

7.4 For Standard Industrial Codes, visit www.osha.gov/pls/imis/sicsearch.html and for the North American Industry Classification System, visit www.census.gov/naics or contact the appropriate Department of Natural Resources Regional Office.

7.5 – 8.1 Self – explanatory.

9.1 A copy of 10 CSR 25 is available at www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25.

9.2 – 9.9 Self – explanatory.

**INSTRUCTIONS FOR COMPLETING FORM B2
APPLICATION FOR CONSTRUCTION OR OPERATING PERMITS FOR FACILITIES WHICH RECEIVE
BASICALLY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY
(Continued)**

- 9.10 Refer to University of Missouri Extension Environmental Quality publications about biosolids - numbers WQ420-426. Available on the Web at <http://extension.missouri.edu/explore/envqual/>. Additionally, the federal sludge regulations are available through the U.S. Government Printing Office at www.gpoaccess.gov/cfr/index.html.
10. Provide the name and address of the first downstream landowner, different from that of the permitted facility, through whose property the discharge will flow. For discharges that leave the permitted facility and flow under a road or highway, or along the right-of-way, the downstream property owner is the landowner that the discharge flows to after leaving the right-of-way.
11. – 11.3 Self – explanatory.

PART B – ADDITIONAL APPLICATION INFORMATION

20. – 20.3 Self – explanatory.
- 20.4 Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used at the outfall pipe and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates; the department's mapping system is available at www.dnr.mo.gov/internetmapviewer/.
- 20.5 – 20.7 Self – explanatory.

PART C – CERTIFICATION

30. Signature – All applications must be signed as follows and the signatures must be original:
- a. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
 - b. For a partnership or sole proprietorship, by a general partner or the proprietor.
 - c. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

PART D – EXPANDED EFFLUENT TESTING DATA

- 40.1 Self – explanatory. ML/MDL means minimum limit or minimum detection limit.

PART E – TOXICITY TESTING DATA

- 50.1 – 50.3 Self – explanatory.

PART F – INDUSTRIAL USER DISCHARGES AND RCRA/CERCLA WASTES

60. Federal regulations are available through the U.S. Government Printing Office at www.gpoaccess.gov/cfr/index.html.
- 60.1 Self – explanatory
- 60.2 A non-categorical significant industrial user is an industrial user that is not a CIU and meets one or more of the following:
- i. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions).
 - ii. Contributes a process waste stream that makes up five percent or more of the average dry weather hydraulic or organic capacity of the treatment plant.
 - iii. Is designated as an SIU by the control authority.
- 60.3 – 60.13 Self – explanatory.

PART G – COMBINED SEWER SYSTEMS

70. – 70.10 Self – explanatory.

This completed form, along with the applicable permit fees, should be submitted to the appropriate Department of Natural Resources Office (See end of Part C). Submittal of an incomplete application may result in the application being returned. Map of regional offices with addresses and phone numbers are available on the Web at www.dnr.mo.gov/regions/ro-map.pdf. If there are any questions concerning this form, please contact the appropriate Regional Office or the Department of Natural Resources, Water Protection Program, Water Pollution Branch, NPDES Permits and Engineering Section at 573-751-6825.



www.warrensburg-mo.com

Joe Tilden
102 S. Holden Street
Warrensburg, MO 64093
(660) 262-4710

Date: April 10, 2013

Missouri Department of Natural Resources
Water Protection Program
NPDES Permits and Engineering Section

RECEIVED

APR 15 2013

RE: East WWTP, MO- 0094579
NPDES Permit Modification

WATER PROTECTION PROGRAM

Dear Sir or Madam:

Thank you for your consideration regarding the permit modification form (B-2).

The City of Warrensburg would like to request an NPDES permit modification concerning Lead and Copper, Total Recoverable limits at the East Wastewater Treatment Plant MO-0094579.

With the new permit limits issued on July 17, 2011 the City's East WWTP has not consistently met permitted limits for Copper, Total Recoverable.

Between June 13, 2012 and November 27, 2012 the City conducted a downstream water hardness study of Bear Creek. The downstream water hardness of Bear Creek indicates that the downstream water hardness values are higher than the default values used by the state in determining the Copper and Lead, Total Recoverable Limits.

On February 1, 2013 the City sent Ms. Sappington with MDNR Water Protection Program (WPP) in Jefferson City a letter and two (2) copies of the downstream water hardness study of Bear Creek and Postoak Creek with a request to forward one (1) copy to Mr. Gateley with MDNR WPP.

As requested by Ms. Clark with the Missouri Department of Natural Resources, the City of Warrensburg has filled out a permit modification form (B-2) concerning the East WWTP.

Due to limited space on the permit modification form, attachment A is an attempt to provide MDNR WPP with an explanation concerning the permit modification request.

Respectfully;

Joe Tilden
WPC Operations Manager



www.warrensburg-mo.com

Joe Tilden
102 S. Holden Street
Warrensburg, MO 64093
(660) 262-4710

Date: April 10, 2013

Attachment A

Due to limited space on the permit modification form, attachment A is an attempt to provide MDNR WPP with an explanation concerning the permit modification request.

Form B-2- Application for Construction or Operating Permit for Facilities which receive primarily domestic waste and have a flow more than 100,000 gallon per day.

Part A- Basic Application Information

Page 2

1. This application is for:

- An operating permit modification: **East WWTP MO-0094579**
 - Reason for the permit modification:
 1. Modification of Copper, Total Recoverable limits
 2. Modification of Lead, Total Recoverable limits

1.1 Self Explanatory

1.2 Included is the \$200.00 permit modification fee. Check # 083130

2. Self Explanatory

2.1 Self Explanatory

2.2 No GPS available. City used the Department's mapping system.

3. Self Explanatory

3.1 City requests review of the draft permit modification, if applicable.

4. Self Explanatory

5. Self Explanatory

6. Self Explanatory

Page 3

7. Part A- Additional Facility Information

7.1 Self Explanatory

7.2 Topographic Map:

- a. Attached as B-2, 7.2 a.
- b. Attached as B-2, 7.2 b.
- c. Two separate attachments as B-2, 7.2 c and B-2, 7.2 a. c. d. f.
- d. Two separate attachments as B-2, 7.2 d. and B-2, 7.2 a. c. d. f.
- e. None
- f. Attached as B-2, 7.2 a. c. d. f.
- g. No waste classified as hazardous enters the treatment works.

7.3 Attached as:

- B-2, 7.3 Process flow diagrams.
- B-2, 7.3 Daily average flow rates.

7.4 Please advise if the SIC and NAICS code should be listed under Facility or Discharge.

7.5 Number of separate discharge points is one (1)

- One (1) discharge point, outfall 001.
- Outfall 002 has been plugged and is out of service.
- Flood pump discharge valve is closed and the pump is locked & tagged out.

7.6 Population Equivalent used for people connected:

- Number of Houses and Apartments comes from Johnson Co. Assessors office.
- Trailers- hand counted
- Other- students living in UCM dormitories per number of rooms=1,300.
- 2.3 are the average persons per households in Warrensburg.
- Actual flow= daily average flow from January 2012 through December 2012.

7.7 Self Explanatory

7.8 Length of sewer is for the East WWTP only.

7.9 Self Explanatory

7.10 Self Explanatory

A. Self Explanatory

B. Self Explanatory

7.11 Self Explanatory

7.12 Self Explanatory

7.13 According to Warrensburg East Fact sheet a WLA study was performed by EPA in 1991. Attached as B-2, 7.13

7.14 Attached as B-2, 7.14

8. Laboratory Control Information:

8.1 Self Explanatory

Page 4

9. Sludge Handling, Use and Disposal:

9.1 Self Explanatory

9.2 Self Explanatory

9.3 Capacity of Sludge holding Structures:

9.4 Self Explanatory

9.5 Self Explanatory

9.6 Attached as B-2, Part A, 9.6

9.7 Attached as B-2, Part A, 9.6 & 9.7

9.8 Self Explanatory

9.9 Self Explanatory

9.10 Self Explanatory

10. Attached as B-2, Part A, 7.2 b & 10.0

11. Drinking Water Supply Information

11.1 Source of Drinking Water Supply

A. Self Explanatory

- B. Self Explanatory
- C. Self Explanatory
- 11.2 Self Explanatory
- 11.3 Self Explanatory

End of Part A

Part B- Additional Application Information

Page 5

- 20. Please advise if the question is GPD daily average or GPD during a heavy rain event.
- 20.1 Self Explanatory
- 20.2 Self Explanatory
- 20.3 Wastewater Discharges
- 20.4 Description of Discharges
 - Self Explanatory
 - A. Self Explanatory, last digit had to be hand written.
 - B. Self Explanatory
 - C. Self Explanatory
 - D. Self Explanatory
 - E. Self Explanatory
 - Self Explanatory
- 20.5 Description of Receiving Water
 - B. Self Explanatory
 - B. Self Explanatory / Self Explanatory
 - B. Self Explanatory / Self Explanatory
 - B. Self Explanatory / B. Self Explanatory

Page 6

- 20.6 Description of Treatment
 - A. Self Explanatory
 - B. Self Explanatory
 - C. Self Explanatory, disinfection by UV.
 - Self Explanatory
 - Self Explanatory
- 20.7 The minimum limit (ML) on page 6 is in reference to the permitted monthly limit.

End of Part B

Part C – Certification

Page 7

30. Certification – Self Explanatory

End of Part C

Part D- Expanded Effluent Testing Data

Page 8, 9, 10, 11 & 12

40. Expanded Effluent Data

40.1 Effluent testing:

- Pollutant Mass is calculated using Outfall 001 Flow Rates provided on page 6.
- As per ES&S Laboratories the number that accompanies the '<' sign is the practical minimum limit that can be quantified on an instrument or by a chemical method. (i.e. <10, has an ML of 10.) Please advise if you need any detection limits (MDL) and we will be happy to request this from ES&S Laboratories.
- Seven (7) pollutants are marked as "Note"; below is an explanation of organic chemistry names as per ES&S Laboratories:

VOLATILE ORGANIC COMPOUNDS

1. CHLORODIBROMO METHANE same as Dibromochloromethane
2. 1,3-DICHLOROPROPYLENE is the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.
3. METHYL BROMIDE also called Bromomethane
4. METHYL CHLORIDE can be known as Chloromethane
5. 3,4-BENZOFLUORANTHENE same as Benzo(b)fluoranthene

ACID-EXTRACTABLE COMPOUNDS

6. P-CHLORO-M-CRESOL also called 4-Chloro,3-Methylphenol
7. 4,6-DINITRO-O-CRESOL is 4,6-Dinitro,2-Methylphenol

End of Part D

Part E – Toxicity Testing Data

Page 13 & 14

50. Toxicity Testing Data – Self Explanatory

50.1 Self Explanatory

- A. through M. - Self Explanatory

50.2 Self Explanatory

50.3 Self Explanatory

End of Part E.

Part F – Industrial User Discharge and RCRA/CERCLA Waste

Page 15

60. Industrial User Discharge and RCRA/CERCLA Waste

- Self Explanatory

60.1 Pretreatment Program

60.1 Pretreatment Program

- Self Explanatory

60.2 Self Explanatory (A and B)

60.3 Self Explanatory

60.4 Self Explanatory

60.5 Self Explanatory

60.6 EnerSys:

A. Self Explanatory, GPD had to be hand written

B. Self Explanatory, GPD had to be hand written

C. Self Explanatory

60.6 Stahl:

A. Self Explanatory, GPD had to be hand written

B. Self Explanatory, GPD had to be hand written

C. Self Explanatory

60.7 Self Explanatory (A and B)

60.8 Self Explanatory

Page 16

60.9 Self Explanatory

60.10 Self Explanatory

60.11 Self Explanatory

60.12 Self Explanatory

60.13 Self Explanatory (A and B)

End of Part F

Part G- Combined Sewer System

Page 17

70. Self Explanatory

End of Part G

I would like to take this opportunity to thank you and your colleagues for your help and support in this matter.

Feel free to contact my office if you have questions or require additional information.

Respectfully,

Joe Tilden

WWTP Operations Manager

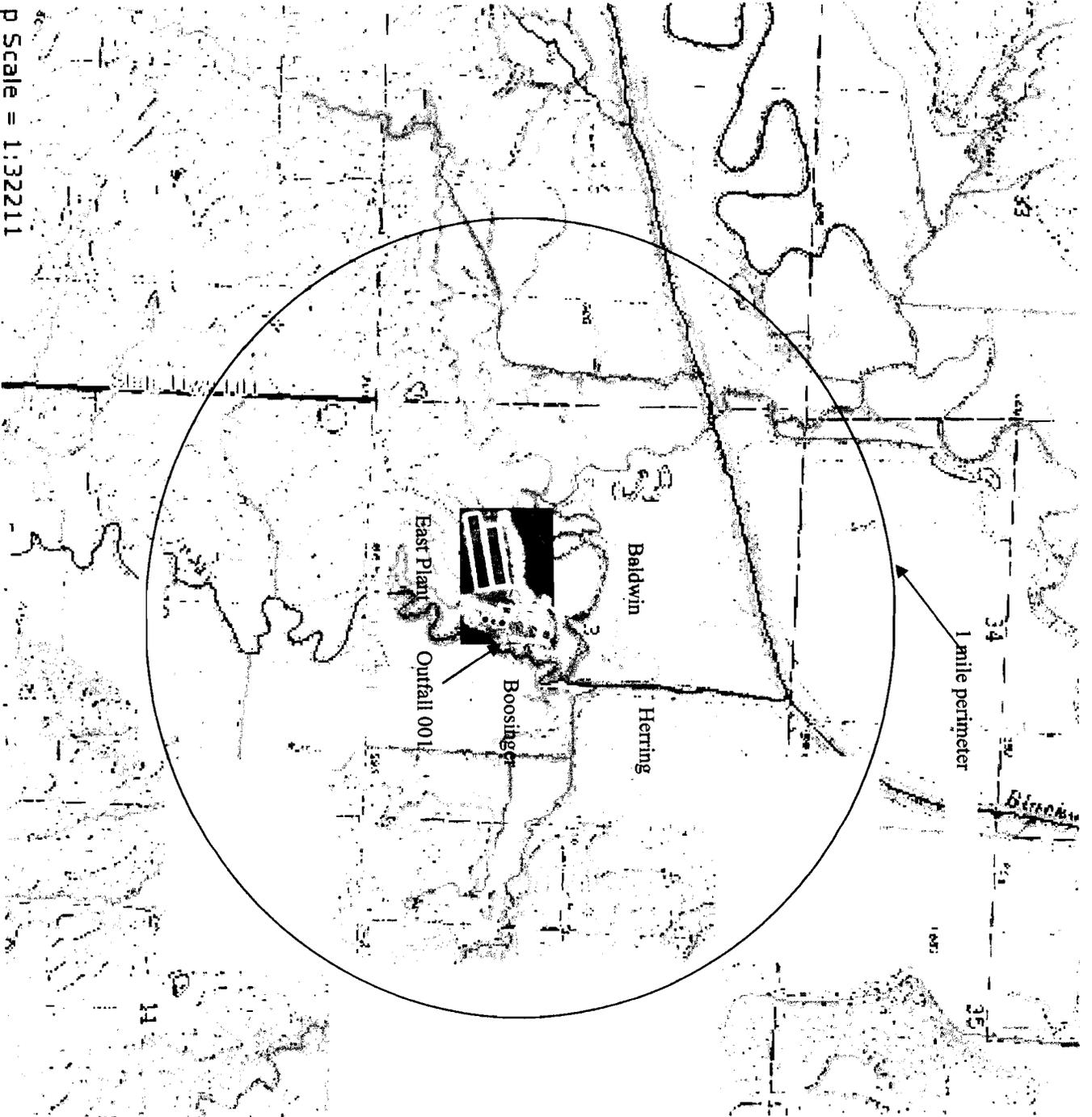
Warrensburg MO. 64093

660-262-4710

B-2 7.2 a.

Warrensburg East WWTF MO-0094579

B-2 7.2 A Topo Map.

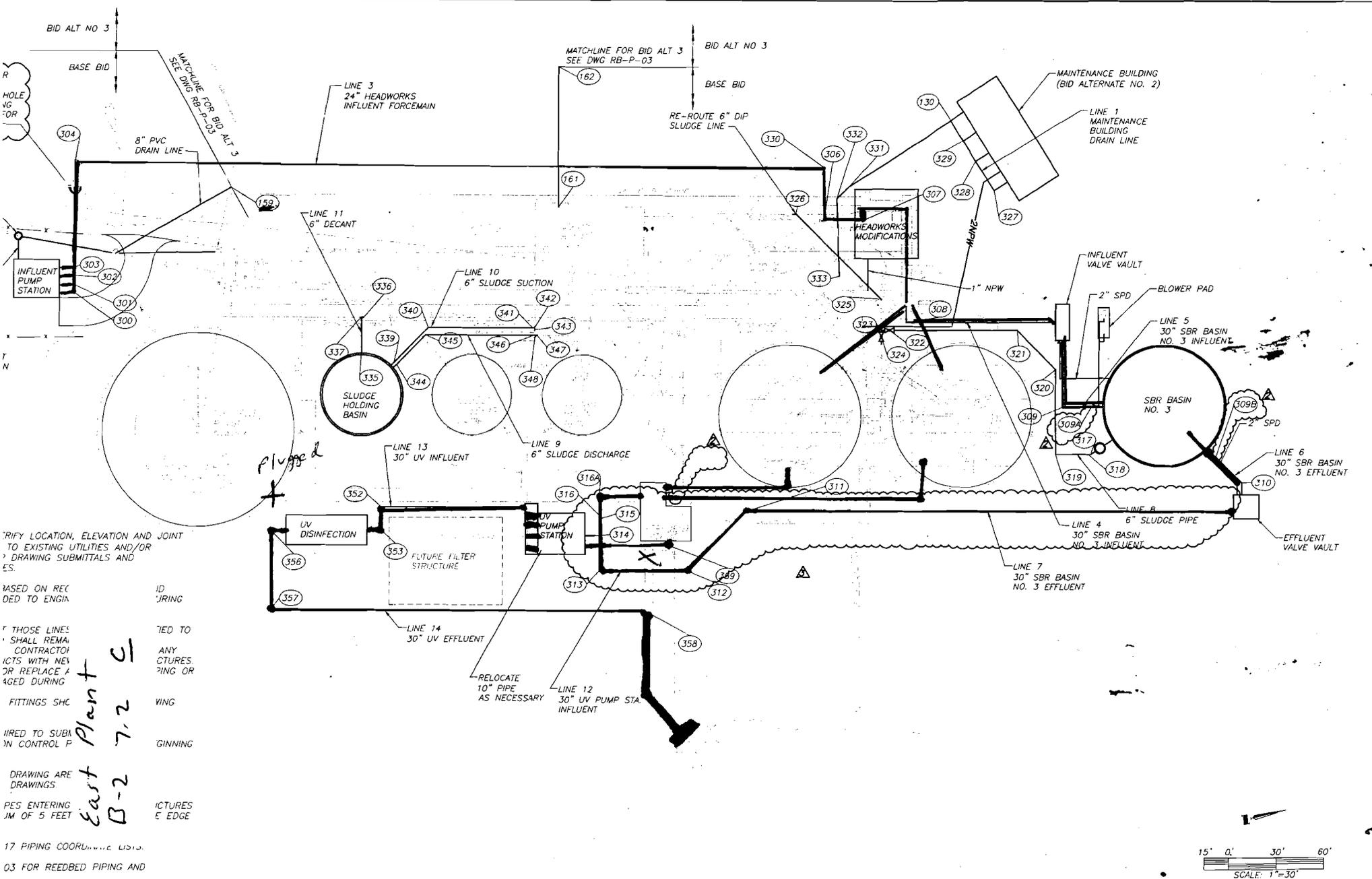


Scale = 1:32211

East Plant Downstream Landowners (B-2 Form 7.2 b & 10.0)

Gary Baldwin Cattle & Grain Farms
180 NE 201 Rd
Warrensburg, Mo 64093

Don Boosinger
516 NE 350 Rd
Knob Noster, Mo 65336



VERIFY LOCATION, ELEVATION AND JOINT TO EXISTING UTILITIES AND/OR DRAWING SUBMITTALS AND E.S.

BASED ON RECORD TO ENGIN

IF THOSE LINES SHALL REMAIN CONTRACTOR TO VERIFY WITH NEW OR REPLACE AS AGED DURING

FITTINGS SHC

HIRE TO SUB IN CONTROL P

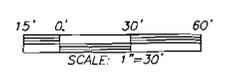
DRAWING ARE DRAWINGS

PIPES ENTERING 1/2" OF 5 FEET

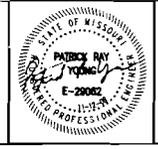
17 PIPING COORDINATE LIST

03 FOR REEBED PIPING AND

East Plant B-2 7.2 C



NT NO.	USER ID.	DATE	BY	REVISION				
1	09/23/08	ABB		DRAWING RE-ISSUED PER ADDENDUM				
2	10-24-08	ABB		DRAWING RE-ISSUED PER ADDENDUM NO. 2				
3	11/12/08	ABB		DRAWING RE-ISSUED PER ADDENDUM NO. 5				
<table border="1"> <tr> <td>BY:</td> <td>CHECKED BY:</td> </tr> <tr> <td>ZAC</td> <td>PRY</td> </tr> </table>					BY:	CHECKED BY:	ZAC	PRY
BY:	CHECKED BY:							
ZAC	PRY							



E. T. ARCHER CORPORATION D.B.A.

Archer

TOTAL PROJECT MANAGEMENT

CORPORATE OFFICE: 3741 NE TROON DRIVE
LEE'S SUMMIT, MO 64064
816-554-3019 • Fax 816-554-3061

CITY OF WARRENSBURG, MISSOURI
WASTEWATER FACILITY IMPROVEMENTS
CONTRACT T-4, T-5, & T-6

EAST TREATMENT PLANT
PIPING PLAN

PROJECT NO. 300000239 300000305 300000484
DRAWING NO. SP-C-04

East Plant
D. 2 7.2 d.

out fall 002
plugged

X=Sludge Digesters

Bear Creek

Effluent

Center tank only

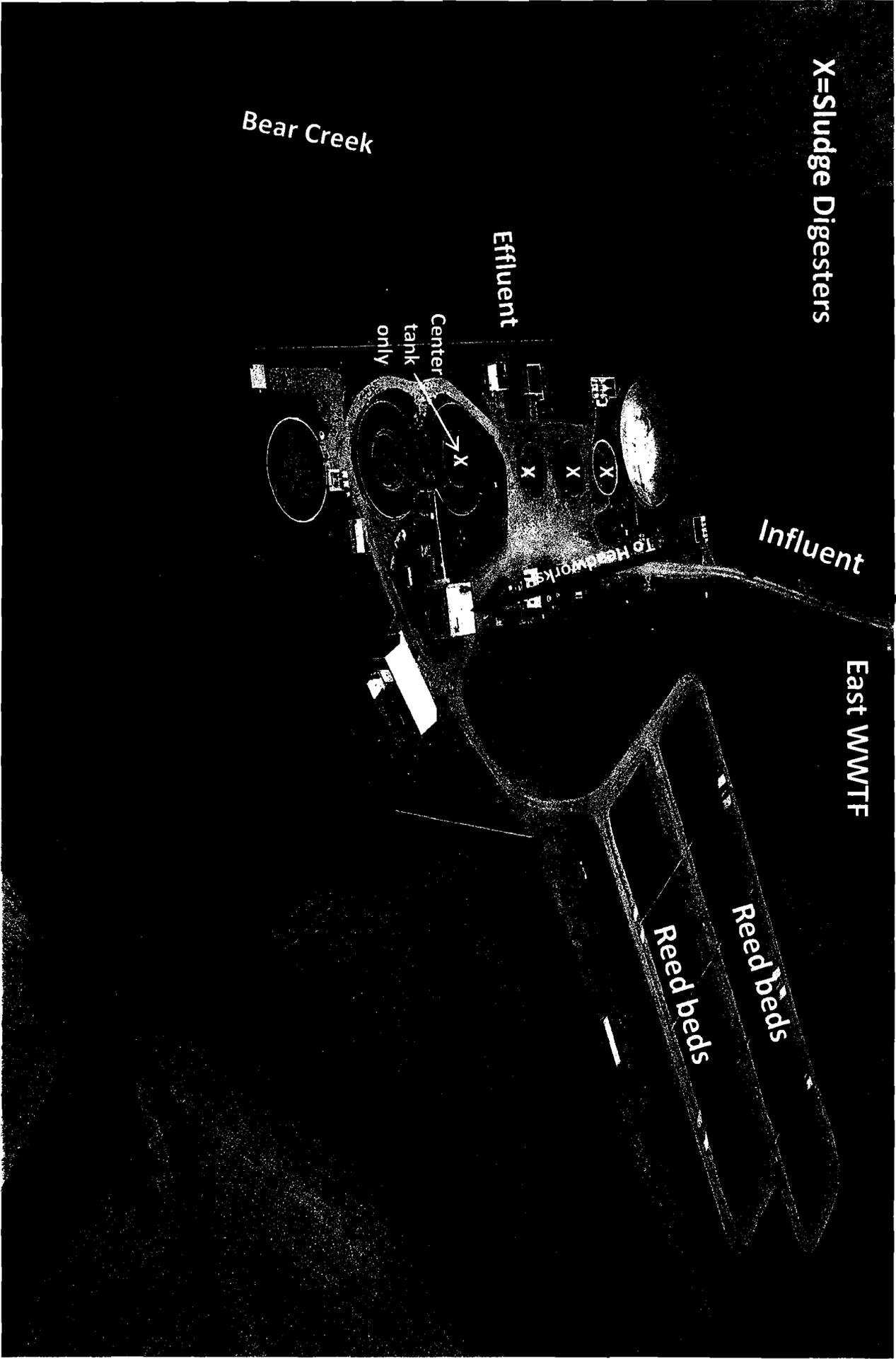
Influent

East WWTF

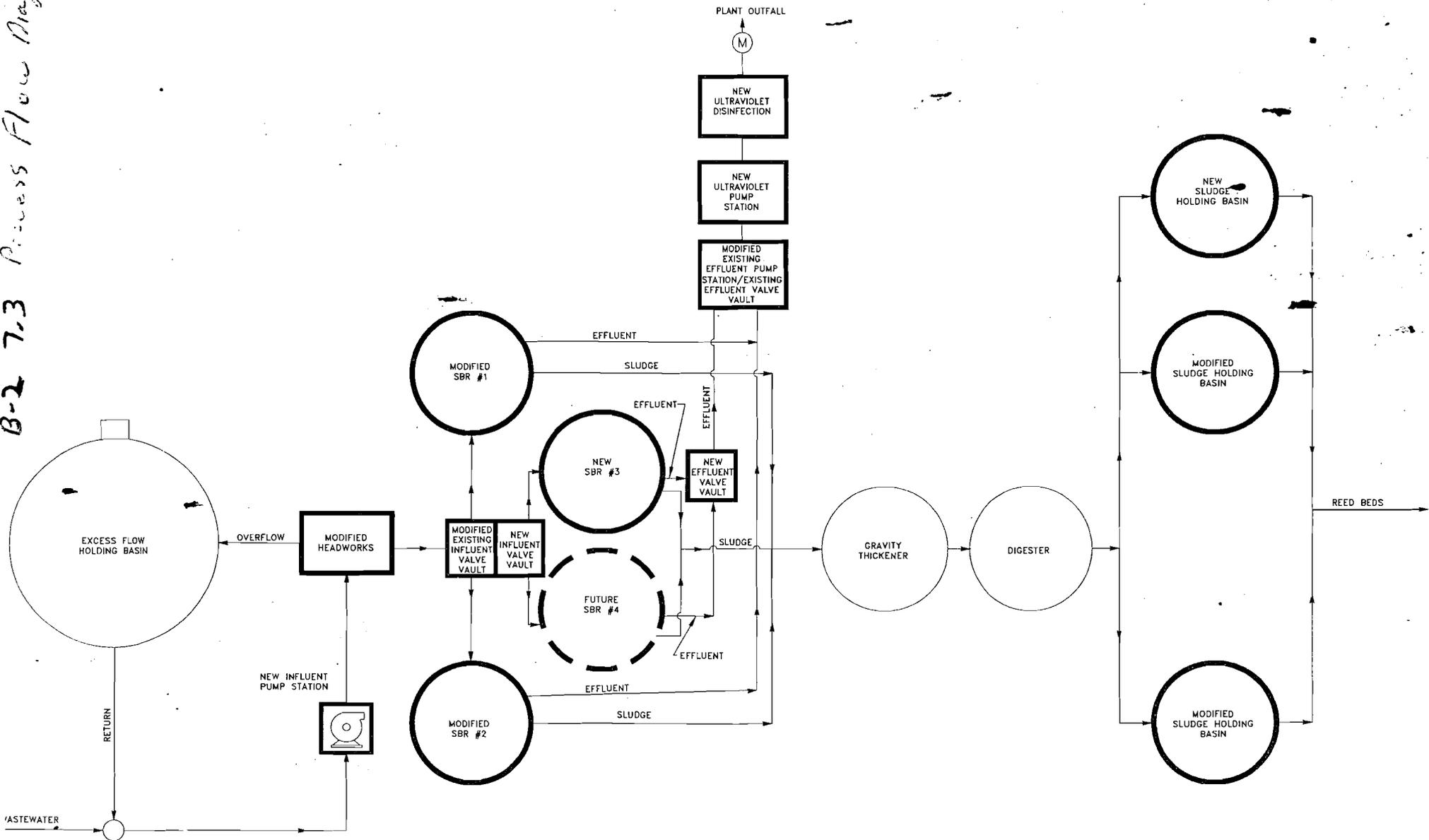
Reed beds

Reed beds

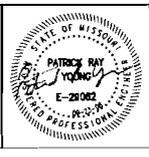
B-2 7.2 a c d f



B-2 7.3 Process Flow Diagram



05 DWG	DOCUMENT NO.:	USER I.D.:	1	09/23/08	ABB	DRAWING RE-ISSUED PER ADDENDUM
PLOT SCALE:	DATE/TIME PLOTTED:					
DESIGNED BY:	DRAWN BY:	CHECKED BY:				
ABB	REP, PAC	FRY				
NO.	DATE	BY				REVISION



E.T. ARCHER CORPORATION D.B.A.
Archer
 TOTAL PROJECT MANAGEMENT
 CORPORATE OFFICE: 3741 NE TROON DRIVE
 LEE'S SUMMIT, MO. 64064
 816-554-3019 • Fax 816-554-3061

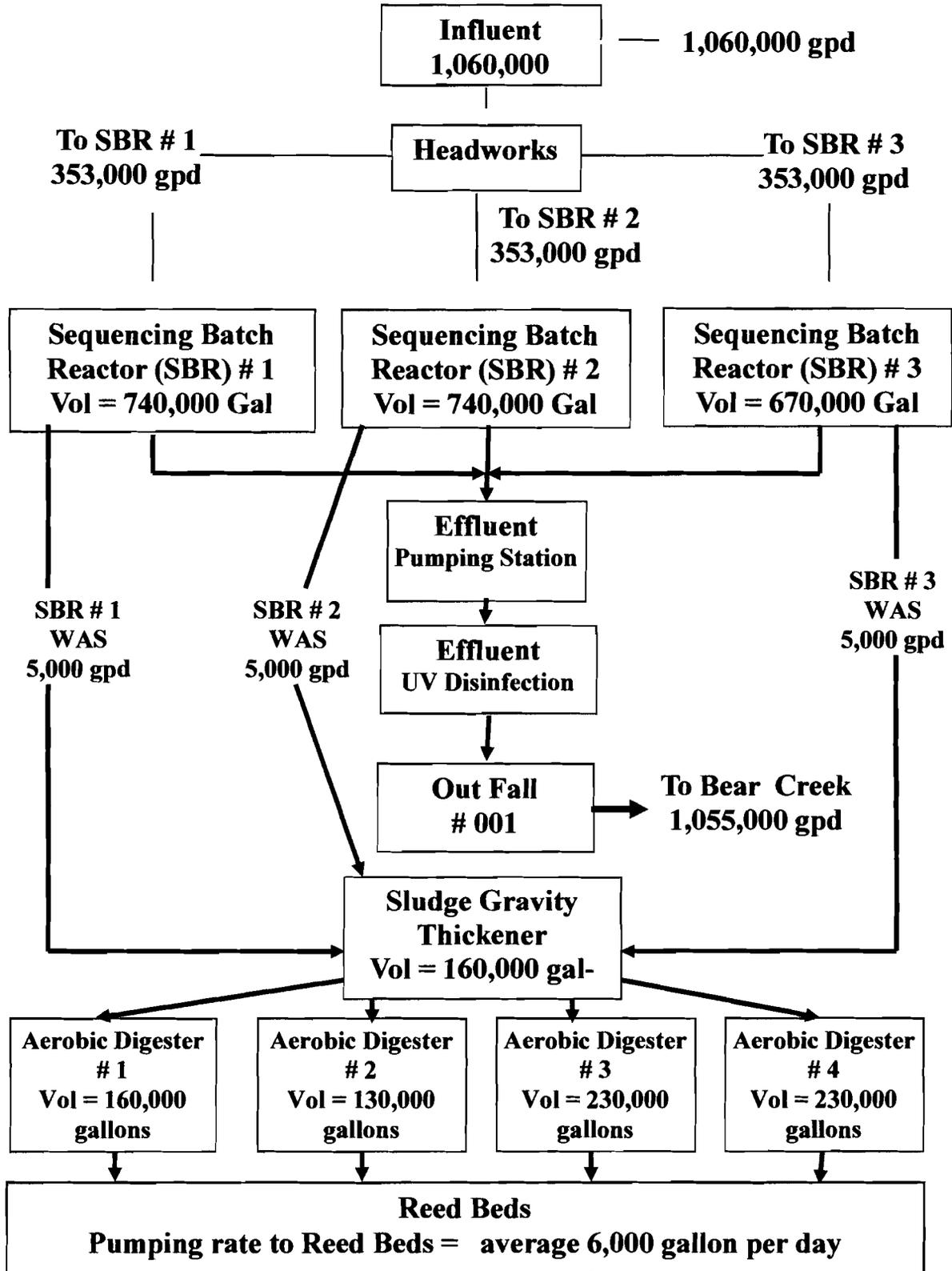
CITY OF WARRENSBURG, MISSOURI
 WASTEWATER FACILITY IMPROVEMENT
 CONTRACT T-4, T-5, & T-6
 EAST AND WEST TREATMENT PLAN
 PROCESS FLOW DIAGRAM

Daily Avg Flow Rates

Flow Diagram

Warrensburg East WWTF

MO-0094579



East WWTP B-2 7.13
MO-00945-79

Outfall #001

Legal Description: NE ¼, SW ¼, Sec. 3, T46N, R25W
Latitude/Longitude: +3848240/-09339194
Receiving Stream: Bear Creek (C)
First Classified Stream and ID: Bear Creek (C) (00933)
USGS Basin & Sub-watershed No.: (10300104 - 050002)

Water Quality History: Infrequent violations of CBOD₅ effluent limitations, Existing effluent limitations derived from a wasteload allocation (WLA) study conducted in 1991 by department staff. No recent stream surveys have been conducted for this facility.

Comments:

A Water Quality Review Sheet with Water Quality Based Effluent Limitations (completed 02/22/06) was developed to reflect the increase in the facility's design flow. A Use Attainability Analysis was conducted for Bear Creek and Whole Body Contact recreation use was retained.

Part II – 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 B Certification Level. Please see **Appendix # 1- Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator's Name: Joe Tilden
Certification Number: 8641
Certification Level: A

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)]:

2008

March 18, 20, & 25thTSS Percent removals were less than 85%.
April 10.....TSS Percent removal on the 1 was less than 85%.
July 16,Incomplete reporting (in stream sampling)
September 14,.....SSO

2009

None

2010

February 16,.....TSS Percent removal exceedance
March 2,.....TSS Percent removal exceedance
August 21,.....Letter of Warning, failure to report a bypass event
August 30,.....Notice of Violation for a bypass event

2011

February 8,Ammonia exceedance
May 25,.....TSS Percent removal exceedance
November..... Fourth quarter copper was over monthly average limit

2012

March..... First quarter copper was over monthly average and daily maximum
May.....Second quarter copper was over monthly average and daily maximum
July..... Third quarter copper was over monthly average and daily maximum
August Third quarter copper was over monthly average and daily maximum
OctoberFourth quarter copper was over monthly average

2013

January.....Copper was over monthly average and daily maximum

Warrensburg East WWTP Annual 2012 Biosolids Report

Reporting Period: 2012 (YEAR)

Permit #: MO- 0094579

From:

Facility Name:

City of Warrensburg / Owner
102 South Holden St
Warrensburg, MO 64093

Warrensburg East WWTP
441 NE 300 RD.
Johnson Co. Mo

RE:

This documentation is a demonstration of why the Warrensburg East WWTP Reed Bed Biosolids Treatment System is not an active biosolids unit.

In the fall of 2009 Warrensburg East WWTP constructed a new Reed Bed system in lieu of their current land application process. Soon after construction the East plant started loading the Reed Beds with a pre-determined quantity of biosolids and continued loading the reed beds through the 2012 reporting period. This activity is considered treatment while the biosolids remain in the reed beds until final use or disposal.

An explanation of why biosolids need to remain in the reed beds for longer than 2 years prior to final use or disposal is as follows: Reed Bed systems combine the action of conventional sludge drying beds with the effects of aquatic plants upon water-bearing substrates. By having the sludge drying beds constructed in a specific manner and then planted with reeds of the genus *Phragmites australis* further desiccation is effected by the voracious demand for water by these plants. To satisfy this demand, the plants extend their root system continually into the sludge deposits. Additionally, this extended root system causes the establishment of a rich micro flora, which feeds upon the organic content of the sludge. This micro flora is also partly kept aerobic by the action of the plants. So effective is the degradation by the micro flora that eventually up to 97% of the sludge solids are converted into carbon dioxide and water with a corresponding volume reduction. The beneficial end result is that these planted drying beds can be operated for up to six to ten years before the accumulated sludge residues have to be removed for final use or disposal.

The approximate time when the biosolids will be transferred from further treatment to their final use or disposal destination is as follows: Warrensburg East WWTP was designed with a total of nine (9) separate reed beds. Within the next three to four years, three beds will be taken out of service for six months prior to removal of the biosolids, thus starting a three- year rotation for all beds. This allows the uppermost layers to become mineralized and disinfected. Options under consideration for final use or disposal of the biosolids include land application after screening out the rhizomes, incineration, or disposal in a landfill.

Be advised Warrensburg East WWTP did not land apply any sludge or biosolids for the reported period of 2012.

**ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORIES**

1113 Fay Street * Columbia, Missouri 65201 * (573) 449-2646
802 El Dorado Drive * Jefferson City, Missouri 65101 * (573) 636-3303
1775 West Main Street * Sedalia, Missouri 65301 * (660) 826-8618

Date: 20 March 2013

Lab Number: L9190

Project: City of Warrensburg

Location: Warrensburg, Missouri

Date Received: 21 February 2013

Sample No: / 0381 / West WWTF Composite Effluent, 2-19-13, 9:00 am, 6489-6491

Description: 0382 / East WWTF Composite Effluent, 2-19-13, 1:00 pm, 6492-6494

TEST RESULTS:

Parameter:	0381	0382	Units	Method
Phenols	<0.005*	<0.005*	mg/l	5530 B, D
Calcium	72.5	67.1	mg/l	6020
Magnesium	24.5	27.4	mg/l	6020
Total Hardness	282	280	mg/l	2340 B
Semivolatile Organics	**	**	ug/l	
Volatile Organic Compound	**	**	ug/l	EPA 8260

Sample secured and delivered to laboratory by others

**See attached report

* Analysis by PDC Laboratories

Method number from "Standard Methods for the Examination of Water & Wastewater", current edition, unless noted otherwise.

cc: Phil Adlich
1 email Adlich
email Simmons

Engineering Surveys & Services

BY:



Linda L. Adams

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802 El Dorado Drive * Jefferson City, Missouri 65101 * (573) 636-3303
1775 West Main Street * Sedalia, Missouri 65301 * (660) 826-8618

Date: 21 March 2013

Lab Number: L9190

Project: City of Warrensburg

Location: Warrensburg, Missouri

Date Received: 01 March 2013

Sample No: / 0494 / West Effluent Composite, 2-28-13, 11:00 am, 6496

Description: 0495 / East Effluent Composite, 2-28-13, 11:00 am, 6497

TEST RESULTS:

Parameter:	0494	0495	Units	Method
Cyanide	<4	<4	ug/l	4500-Cn E

Sample secured and delivered to laboratory by others

Method number from "Standard Methods for the Examination of Water & Wastewater", current edition, unless noted otherwise.

cc: Phil Adlich
1 email Adlich
email Simmons

Engineering Surveys & Services

BY:



Linda L. Adams

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802 El Dorado Drive * Jefferson City, Missouri 65101 * (573) 636-3303
1775 West Main Street * Sedalia, Missouri 65301 * (660) 826-8618

Date: 21 March 2013

Lab Number: L9190

Project: City of Warrensburg

Location: Warrensburg, Missouri

Date Received: 07 March 2013

Sample No: / 0709 / West Effluent, 3-5-13, 8:00 a.m., 6500

Description: 0710 / West Effluent, 3-5-13, 8:00 a.m., 6501

0711 / East Effluent, 3-5-13, 9:00 a.m., 6502

TEST RESULTS:

Parameter:	0709	0710	0711	Units	Method
Kjeldahl Nitrogen	2.2	xxxx	xxxx	mg/l	4500-Norg
Nitrate Nitrogen	8.82	xxxx	xxxx	mg/l	SM16-418D
Nitrite Nitrogen	xxxx	0.061	0.092	mg/l	4500-NO2-B

Sample secured and delivered to laboratory by others

Method number from "Standard Methods for the Examination of Water & Wastewater", current edition, unless noted otherwise.

cc: Phil Adlich
1 email Adlich
email Simmons

Engineering Surveys & Services

BY:



Linda L. Adams



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 (309) 692-9688 • (800) 752-6651 • FAX (309) 692-9589



Engineering Surveys & Services-Columbia
 1113 Fay St
 Columbia, MO 65201
 Attn: Linda Adams

Date Received: 02/23/13 8:45
 Report Date: 03/11/13
 Customer #: 275332

Laboratory Results

Sample No: 3022770-02

Collect Date: 02/19/13 00:00

Matrix: Storm Water

Sample Description: JN #9190 SN #0382 *East*

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
Semivolatile Organics - PIA						
Hexachlorocyclopentadiene	< 53 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Hexachloroethane	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Indeno(1,2,3-cd)pyrene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Isophorone	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Naphthalene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Nitrobenzene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
N-Nitrosodimethylamine	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
N-Nitrosodi-n-propylamine	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
N-Nitrosodiphenylamine	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Pentachlorophenol	< 53 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Phenanthrene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Phenol	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Pyrene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
Volatile Organics - PIA						
1,1,1-Trichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,1,2,2-Tetrachloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,1,2-Trichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,1-Dichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,1-Dichloroethene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,2-Dichlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,2-Dichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Surrogate: 1,2-Dichloroethane-d4	94 % 65-131			02/27/13 20:56	JMB	EPA 624
1,2-Dichloropropane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,3-Dichlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
1,4-Dichlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
2-Chloroethylvinyl ether	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Acrolein	< 50 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Acrylonitrile	< 50 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Benzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Bromodichloromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624

3022770



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Engineering Surveys & Services-Columbia
 1113 Fay St
 Columbia, MO 65201
 Attn: Linda Adams

Date Received: 02/23/13 8:45
 Report Date: 03/11/13
 Customer #: 275332

Laboratory Results

Sample No: **3022770-02**

Collect Date: **02/19/13 00:00**
 Matrix: **Storm Water**

Sample Description: JN #9190 SN #0382 *East*

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
Volatile Organics - PIA						
<i>Surrogate: Bromofluorobenzene</i>	102 % 57.3-163			02/27/13 20:56	JMB	EPA 624
Bromoforn	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Bromomethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Carbon tetrachloride	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Chlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Chloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Chloroform	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Chloromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
cis-1,3-Dichloropropene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Dibromochloromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Ethylbenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Methylene chloride	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Tetrachloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Toluene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
<i>Surrogate: Toluene-d8</i>	102 % 67.5-139			02/27/13 20:56	JMB	EPA 624
trans-1,2-Dichloroethene	< 20 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
trans-1,3-Dichloropropene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Trichloroethene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Trichlorofluoromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Vinyl chloride	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624
Xylenes- Total	< 15 ug/L		02/27/13 00:00	02/27/13 20:56	JMB	EPA 624



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 Columbia, MO 65201
 Attn: Linda Adams

Date Received: 02/23/13 8:45
 Report Date: 03/11/13
 Customer #: 275332

Laboratory Results

Sample No: **3022770-01**

Collect Date: **02/22/13 00:00**
 Matrix: **Storm Water**

Sample Description: JN #9190 SN #0381 *West*

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
<u>Volatile Organics - PIA</u>						
trans-1,2-Dichloroethene	< 20 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
trans-1,3-Dichloropropene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Trichloroethene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Trichlorofluoromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Vinyl chloride	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Xylenes- Total	< 15 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624

Sample No: **3022770-02**

Collect Date: **02/19/13 00:00**
 Matrix: **Storm Water**

Sample Description: JN #9190 SN #0382 *East*

Parameters	Result	Qual	Prep Date	Analysis Date	Analyst	Method
<u>General Chemistry - PIA</u>						
Phenolics	< 0.0050 mg/L		02/26/13 07:39	02/27/13 15:08	lgbrs	EPA 420.4 - QC 10-210-00-1A
<u>Semivolatile Organics - PIA</u>						
1,2,4-Trichlorobenzene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
1,2-Dichlorobenzene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
1,2-Diphenylhydrazine	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
1,3-Dichlorobenzene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
1,4-Dichlorobenzene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2,4,6-Trichlorophenol	< 53 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2,4-Dichlorophenol	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2,4-Dimethylphenol	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2,4-Dinitrophenol	< 53 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2,4-Dinitrotoluene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2,6-Dinitrotoluene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2-Chloronaphthalene	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2-Chlorophenol	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625
2-Nitrophenol	< 11 ug/L		02/25/13 09:19	03/06/13 18:18	SNS	EPA 625

3022770

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1775 West Main Street * Sedalia, Missouri 65301 * (660) 826-8618

6504 6505 + 6507
6506
Date: 05 April 2013

Lab Number: L9190

Project: City of Warrensburg

Location: Warrensburg, Missouri

Date Received: 29 March 2013

Sample No: / 1236 / East WWTP, Effluent, 3-28-13, 9:00 a.m., 6504, 6505

Description: 1237 / West WWTP, Effluent, 3-28-13, 9:00 a.m., 6506, 6507

TEST RESULTS:

Parameter:	1236	1237	Units	Detection	Method
Chlorine, Residual	0.10	0.10	mg/l	0.025	1500-CI G
Total Dissolved Solids	607	517	mg/l	1.0	2540-D
Phosphorous, Total	1.60	2.09	mg/l	0.05	4500-P B,E

Sample secured and delivered to laboratory by others

Method number from "Standard Methods for the Examination of Water & Wastewater", current edition, unless noted otherwise.

cc: Phil Adlich
1 email Adlich
email Simmons

Engineering Surveys & Services

BY:

Linda L.
Adams

Digitally signed by Linda L. Adams
DN: cn=Linda L. Adams, o=Engineering
Surveys and Services, ou=Analytical
Laboratory, email=LAdams@ESS-
Inc.com, c=US
Date: 2013.04.05 15:20:54 -0500

Linda L. Adams