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-0055905
Owner:	City of Warrensburg
Address:	102 South Holden Street, Warrensburg, MO 64093
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Warrensburg West Wastewater Treatment Plant
Facility Address:	75 Northwest Highway 50, Warrensburg, MO 64093
Legal Description:	SE ¼, SW ¼, NW ¼, Sec. 14, T46N, R26W, Johnson County
UTM Coordinates:	X=434040, Y=4293043
Receiving Stream:	Unnamed tributary to Postoak Creek (U)
First Classified Stream and ID:	Postoak Creek (P) (928)
USGS Basin & Sub-watershed No.:	(10300104 – 0108)

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 – **Certified "B" Operator Required**
Influent pumping station / bar screens / aerated grit chamber / flow equalization basin / three (3) sequencing batch reactors/ effluent pumping station / UV disinfection / sludge gravity thickener / four (4) aerobic sludge digester basins / reed beds / sludge is land applied or landfilled
Design population equivalent is 15,000.
Design flow is 1,500,000 gallons per day.
Actual flow is 1,028,000 gallons per day.
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.

December 4, 2009
Effective Date

October 9, 2013
Modification Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

December 3, 2014
Expiration Date

John Madras
John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A-1. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 6
		PERMIT NUMBER MO-0055905

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/day	24 hr. total
Carbonaceous Biochemical Oxygen Demand$_5$						
(May 1 – October 31)	mg/L	15		8	once/month	composite**
(November 1 – April 30)	mg/L	22		12	once/month	composite**
Total Suspended Solids	mg/L		45	30	once/month	composite**
E. coli (Note 1)	#/100 ml		1030	206	four/month	grab
pH – Units	SU	***		***	once/month	grab
Ammonia as N						
(May 1 – October 31)	mg/L	4.9		1.3	once/month	grab
(November 1 – April 30)	mg/L	8.7		2.3		
Oil & Grease	mg/L	15		10	once/month	grab
Temperature	°C	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE JANUARY 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Copper, Total Recoverable	µg/L	29.9		15.7	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 #12			once/year	composite**
WET TEST REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE SEPTEMBER 28, 2012.						

* Monitoring requirement only.

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

*** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

**** See table below for quarterly sampling.

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

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.

TABLE B.
INFLUENT MONITORING REQUIREMENTS

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
Biochemical Oxygen Demand$_5$	mg/L	once/month	grab
Total Suspended Solids	mg/L	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE JANUARY 28, 2010.

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.

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

D. SPECIAL CONDITIONS (continued)

6. 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.

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

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 October 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. 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;

D. SPECIAL CONDITIONS (continued)

(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.

12. 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%	Annually	24 hour Composite	Sample in any month, Report in September

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

(a) Test Schedule and Follow-Up Requirements
(1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
(a) 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.
(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.

D. SPECIAL CONDITIONS (continued)

(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
FACT SHEET
FOR THE PURPOSE OF MODIFICATION
OF
MO-0055905
WARRENSBURG WEST WASTEWATER TREATMENT PLANT

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

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

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

This Factsheet is for a Major ☒

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:
Influent pumping station / bar screens / aerated grit chamber / flow equalization basin / three (3) sequencing batch reactors/ effluent pumping station / UV disinfection / sludge gravity thickener / four (4) aerobic sludge digester basins / reed beds / sludge is land applied or landfilled

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: updated UTM coordinates, updated USGS Basin and Sub-watershed number, modified the effluent limits for TR Copper as per the new information provided by the City regarding hardness, removed interim sections of Table A that have already passed, updated Table A section to match the current permit templates, added asterisk for Table A section adding section defining 24 hour composite, updated Special Conditions, updated the design flow, actual flow, and design sludge production as the City of Warrensburg connected the Warrensburg North lagoon to the facility in 2010 and provided the permit writer with the updated information in an e-mail received on July 1, 2013.

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 Certification Level.

Operator's Name: Norman E. Elliott Sr.
Certification Number: 8819
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)
Unnamed tributary to Postoak Creek	U	NA	General Criteria	10300104 – 0108	0.2
Postoak Creek	P	928	LWW, AQL, WBC-B, SCR		

* - 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
Unnamed tributary to Postoak Creek (U)	-	-	-

MIXING CONSIDERATIONS
Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].
Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

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.

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

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 (BOD_5) 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:

$$Ce = \frac{(Qe + Qs)C - (Cs \times Qs)}{(Qe)}$$ (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 NH_3)
☒ 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.

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	*/*
$CBOD_5$ (May 1 – October 31)	mg/L	1	15		8	No	15/8
$CBOD_5$ (November 1 – April 30)	mg/L	1	22		12	No	22/12
TSS	mg/L	1		45	30	No	45/30
pH	SU	1	6.0 – 9.0			No	6.0 – 9.0
Ammonia as N (May 1 – October 31)	mg/L	2, 3, 5	4.9		1.3	No	4.9/1.3
Ammonia as N (November 1 – April 30)	mg/L	2, 3, 5	8.7		2.3	No	8.7/2.3
Escherichia coli	**	1, 3		1030	206	No	*/206
Temperature	° C	1, 3	*		*	No	*/*
Oil & Grease (mg/L)	mg/L	1, 3	15		10	No	15/10
Copper, TR	µg/L	2, 3	29.9		15.7	No	19/9
Whole Effluent Toxicity (WET) Test	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

* - Monitoring requirement only.
** - # of colonies/100mL; the Monthly Average for *E. coli* and Fecal Coliform is a geometric mean.

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 (BOD_5).**

  ☒ – 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.

- **Temperature**. Monitoring requirements have been retained from previous state operating permit.

- ***Escherichia coli (E. coli)***. Monthly average of 206 per 100 ml as a geometric mean and Weekly Average of 1030 during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (B) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- **Fecal Coliform**. This parameter was removed as E. coli is now the indicator for bacteria.

- **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 227 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

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 227 mg/L.

- **Copper, Total Recoverable**. Protection of Aquatic Life Chronic Criteria = 18.0 µg/L, Acute Criteria = 29.1 µg/L.

  Chronic =18.1/0.960 =18.8 µg/L
  Acute = 29.1/0.960 = 30.3 µg/L

  Chronic WLA: $C_e = ((2.325 + 0.0)18.8 – (0.0 * 0.0))/2.325$
  $C_e = 18.8$ µg/L

  Acute WLA: $C_e = ((2.325 + 0.0)30.3 – (0.0 * 0.0))/2.325$
  $C_e = 30.3$ µg/L

  $LTA_c = 18.8(0.562) = 10.57$ µg/L [CV = 0.53, 99th Percentile]
  $LTA_a = 30.3\ (0.353) = 10.7$ µg/L [CV = 0.53, 99th Percentile]

  Use most protective number of LTA_c or LTA_a.

  MDL = 10.57 (2.827) = 29.9 µg/L [CV = 0.53, 99th Percentile]
  AML = 10.57 (1.487) = 15.7 µg/L [CV = 0.53, 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 BOD_5 whether or not its design flow is being exceeded.
  - ☐ Facility has Water Quality-based effluent limitations for toxic substances (other than NH_3).

  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/day	once/month
Carbonaceous Biochemical Oxygen Demand$_5$	once/month	once/month
Total Suspended Solids	once/month	once/month
E. coli	four/month	once/month
pH – Units	once/month	once/month
Ammonia as N	once/month	once/month
Oil & Grease	once/month	once/month
Temperature	once/month	once/month
Copper, Total Recoverable	once/quarter	once/quarter

Sampling Frequency Justification:
Sampling and Reporting Frequency was retained from previous permit.

Sampling Type Justification
As per 10 CSR 20-7.015, BOD_5, 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*, Fecal Coliform, and Oil & Grease. This is due to the holding time restriction for *E. coli* and Fecal Coliform, 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 st your facility under the current water quality standard (WQS), are:

Summer – 4.9 mg/L daily maximum, 1.3 mg/L monthly average.
Winter – 8.7 mg/L daily maximum, 2.3 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 – 2.7 mg/L daily maximum, 0.6 mg/L monthly average.
Winter – 8.1 mg/L daily maximum, 1.9 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 – Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

☒ Not Applicable; The Department is not required to determine findings of affordability because the permit contains no new conditions or requirements that convey a new cost to the facility.

Part IX – 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.

☒ - 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 warrant the modification of effluent limits and/or the terms and conditions of this permit. The facility requested that the facility description be updated with the most recent design population equivalent, design flow, actual flow, and design sludge production. The facility description was updated in the public notice permit draft as per the request made by the City in the July 1, 2013 15 day preview period. The facility requested that Fecal Coliform be removed from the permit and to keep the E. coli limits. Fecal Coliform was removed from the permit as requested and E. coli final effluent limitations were updated to include a 7 day Geomean (under weekly average column) of 1030 #/100 ml and a 30 day Geomean (under monthly average column) of 206 #/100 ml. The E. coli limits are for Whole Body Contact B receiving streams, to which the facility discharges. The facility requested that the definition of 24-hr. composite sampling be changed from requiring a sample at 30 minute intervals to flow proportional intervals due to how the plant operates. The definition was updated to require samples to be collected at flow proportional intervals as requested. The facility also requested that the CV value of 0.622 from the 2009 fact sheet be used to generate Total Recoverable Copper 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 0.53, which was used to determine limits. The Department cannot use the 2009 CV value as it is no longer valid.

DATE OF FACT SHEET: JUNE 13, 2013, **UPDATED:** OCTOBER 4, 2013

COMPLETED BY:

BRANT FARRIS, ENVIRONMENTAL SPECIALIST III
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
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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, Total Recoverable	30.3	52.94	18.8	52.94	47.00	32/4	0.53	1.65	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 WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL 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.

C11311
AP15150

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

FOR AGENCY USE ONLY	
CHECK NUMBER	
083130	
DATE RECEIVED	FEE SUBMITTED
4/15/13	$200.00 SB

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- 0055905 Reason: Modification to Metal Limitations, Facility Discriti

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		TELEPHONE NUMBER WITH AREA CODE	
Warrensburg West Wastewater Treatment Plant		660-262-4710	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP
75 NW 50 HWY	Warrensburg	Missouri	64093

2.1 **LEGAL DESCRIPTION** (Plant Site): SE ¼, SW ¼, NW ¼, Sec. 14 , T 46 , R 26 W County Johnson

2.2 UTM Coordinates Easting (X): 434105 Northing (Y): 4293007
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3. OWNER

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE	
City of Warrensburg	Continuing Authority	660-747-9131	
ADDRESS	CITY	STATE	ZIP
102 S. Holden St.	Warrensburg	Missouri	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		CITY	
City of Warrensburg		Warrensburg	
ADDRESS	CERTIFICATE NUMBER (IF APPLICABLE)	STATE	ZIP
102 S. Holden St.	NA	Missouri	64093

5. OPERATOR

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
Norman Elliott	WPC- West Plant Operator III	660-747-6923

6. FACILITY CONTACT

NAME	TITLE	
Joe Tilden	WPC- Manager of Plant Operations	660-262-4710

MO 780-1805 (09-08)

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 West Wastewater Treatment Plant	
PERMIT NO.	COUNTY
MO-0055905	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.*

ALL APPLICANTS MUST COMPLETE PARTS A, B and C

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Warrensburg West WWTP	MO- 0055905	# 001

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/ Gravity Thickener/ 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.)

a. The area surrounding the treatment plant, including all unit processes.
b. The location of the downstream landowner(s). (See Item 10.)
c. 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.
d. The actual point of discharge.
e. 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.
f. Any areas where the sewage sludge produced by the treatment works is stored, treated or disposed.
g. 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:	FACILITY NAICS CODE:	DISCHARGE NAICS CODE:
.	4952 .	.	2213 .

7.5 NUMBER OF SEPARATE DISCHARGE POINTS
one (1)

7.6 NUMBER OF PEOPLE PRESENTLY CONNECTED OR POPULATION EQUIVALENT	DESIGN POPULATION EQUIVILENT
8,503	15,000

NUMBER OF UNITS PRESENTLY CONNECTED
HOMES 2,000 APARTMENTS 250 TRAILERS 148 OTHER 7 Dormitories 1,800 PE

TOTAL DESIGN FLOW (ALL OUTFALLS)	ACTUAL FLOW
1.5 MGD	0.8503 MGD

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
55

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	B. HOW MANY DAYS OF THE WEEK WILL THE DISCHARGE OCCUR?
January through December	Seven (7)

7.11 IS WASTEWATER LAND APPLIED? (If Yes, Attach Form I)	7.12 DOES THIS FACILITY DISCHARGE TO A LOSING STREAM OR SINKHOLE?
Yes ☐ No ☑	Yes ☐ No ☑

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 ☑	No ☐
Push–button or visual methods for simple test such as pH, settleable solids.	Yes ☑	No ☐
Additional procedures such as Dissolved Oxygen, Chemical Oxygen Demand, Biological Oxygen Demand, titrations, solids, volatile content.	Yes ☑	No ☐
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	Yes ☑	No ☐
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	Yes ☐	No ☑

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Warrensburg West WWTP	MO- 0055905	# 001

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 ROM OTHERS
Design Dry Tons/Year (current 152 / city request 240 due to the plant upgrade) Actual Dry Tons/Year 120

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 2.0% ☐ 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	CITY	STATE	ZIP
102 S. Holden St.	Warrensburg	Missouri	64093
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO	
Joe Tilden	660-262-4710	MO- 0055905	

9.9 SLUDGE USE OR DISPOSAL FACILITY
■ By Applicant ☐ By Others (Complete Below)

NAME			
City of Warrensburg Personnel			
ADDRESS	CITY	STATE	ZIP
102 S. Holden St.	Warrensburg	MO	64093
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO	
Joe Tilden	660-262-4710	MO- 0055905	

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			
Marjorie Tackett			
ADDRESS	CITY	STATE	ZIP
53 NW 105 RD	Warrensburg	MO.	64093

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
N/A

C. SURFACE WATER (LAKE, POND OR STREAM)
N/A

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 SPPLY 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	PERMIT NO.	OUTFALL NO.
Warrensburg West WWTP	MO- 0055905	# 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 100,000 GPD Daily Average/ 5,000,000 GPD during a heavy rain event.

BRIEFLY EXPLAIN ANY STEPS UNDERWAY OR PLANNED TO MINIMIZE INFLOW AND INFILTRATION.

Extensive visual inspections, tv inspections, smoke testing, repairs. and public education.

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 ☐ No ☑ 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
NA

TELEPHONE NUMBER WITH AREA CODE
NA

RESPONSIBILITIES OF CONTRACTOR
NA

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	B. Indicate whether the planned improvements or implementation schedule are required by-local, state or federal agencies.
Outfall No. N/A	Yes ☐ No ☑

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 **# 001**

A. LOCATION

¼ SE ¼ SW ¼ NW Section 14 Township 46N Range 26 ☐ E ☑ W

UTM Coordinates Easting (X): 434105 Northing (Y): 4293007

For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

B. Distance from Shore (If Applicable)	C. Depth Below Surface (If Applicable)	D. Average Daily Flow Rate
NA ft.	NA ft.	0.85 mgd

E. Does this outfall have either an intermittent or periodic discharge?

☑ Yes ☐ No If Yes, Provide the following information:

Number of Days Per Year Discharge Occurs:	Average Duration of Each Discharge:	Average Flow Per Discharge:	Months in Which Discharge Occurs:
365	20 minutes.	0.075 mgd	January thru December

Is Outfall Equipped with a Diffuser? ☐ Yes ■ No

20.5 DESCRIPTION OF RECEIVING WATER

B. Name of Receiving Water

Unnamed Tributary to Postoak Creek

B. Name of Watershed (If Known)	U.S. Soil Conservation Service 14-Digit Watershed Code (If Known)
	(10300104-050002)
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 _____ cfs Chronic _____ cfs	B. Total Hardness of Receiving Stream at Critical Low Flow (If Applicable) mg/L of $CaCO_3$ 227

MO 780-1805 (09-08)

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Warrensburg West WWTP	MO- 0055905	# 001

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 BOD_5 Removal Or Design $CBOD_5$ 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)	6.8	S.U.	7.0	S.U.	39
pH (Maximum)	7.3	S.U.	7.0	S.U.	39
FLOW RATE	2.483	MGD	.824	MGD	62
TEMPERATURE (Winter)	19.4	°C	15.1	°C	39
TEMPERATURE (Summer)	29.5	°C	25.2	°C	43

*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	NA	NA
	$CBOD_5$	7	mg/L	4.5	mg/L	16	5210b 20th ed.	8
FECAL COLIFORM		65	#/100 mL	23.3	#/100 mL	3	9223 21st ed.	400
TOTAL SUSPENDED SOLIDS (TSS)		14	mg/L	9.5	mg/L	16	2540D 18th ed.	30
AMMONIA (AS N)		.3	mg/L	.1	mg/L	9	4500 20th ed.	1.3
CHLORINE (TOTAL RESIDUAL, TRC)		.1	mg/L	.1	mg/L	1	1500-Cl-G	
DISSOLVED OXYGEN		8.9	mg/L	7.3	mg/L	39	4500-D 21st ed.	
TOTAL KJELDAHL NITROGEN (TKN)		2.2	mg/L	2.2	mg/L	1	4500-Norg	
NITRATE PLUS NITRITE NITROGEN		8.82	mg/L	8.82	mg/L	1	4500-NO-B	
OIL AND GREASE		1.0	mg/L	.5	mg/L	9	EPA 1664A	10
PHOSPHORUS (TOTAL)		2.09	mg/L	2.09	mg/L	1	4500-P B,E	
TOTAL DISSOLVE SOLIDS (TDS)		517	mg/L	517	mg/L	1	2540 C	
~~OTHER~~ E-Coli		29	mg/L	8	mg/L	9	9223 21st ed.	206

END OF PART B

MO 780-1805 (09-08)

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:	For Design Flows of 1 Million Gallons Per Day or Greater, 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.	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	PERMIT NO.	OUTFALL NO.
Warrensburg West WWTP	MO- 0055905	# 001

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	<470	g	<50	ug/l	<156	g	1	6020	ML
ARSENIC	<5	ug/l	<47	g	<5	ug/l	<16	g	1	6020	ML
BERYLLIUM	<50	ug/l	<470	g	<50	ug/l	<156	g	1	6020	ML
CADMIUM	<5	ug/l	<47	g	<5	ug/l	<16	g	1	6020	ML
CHROMIUM	<10	ug/l	<94	g	<10	ug/l	<31	g	1	6020	ML
COPPER	19	ug/l	178	g	19	ug/l	59	g	1	6020	
LEAD	<5	ug/l	<47	g	<5	ug/l	<16	g	1	6020	ML
MERCURY	<0.5	ug/l	<4.7	g	<0.5	ug/l	<1.6	g	1	3112B	ML
NICKEL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	6020	ML
SELENIUM	<5	ug/l	<47	g	<5	ug/l	<16	g	1	6020	ML
SILVER	<3	ug/l	<28	g	<3	ug/l	<9	g	1	6020	ML
THALLIUM	<100	ug/l	<939	g	<100	ug/l	<311	g	1	6020	ML
ZINC	47	ug/l	441	g	47	ug/l	146	g	1	6020	
CYANIDE	<4	ug/l	<38	g	<4	ug/l	<12	g	1	4500-Cn E	ML
TOTAL PHENOLIC COMPOUNDS	<0.005	mg/l	<47	g	<0.005	mg/l	<16	g	1	5530 B,D	ML
HARDNESS (as $CaCO_3$)	282	mg/l		g	282	mg/l		g	1	2340 B	ML
USE THIS SPACE (OR A SEPARATE SHEET) TO PROVIDE INFORMATION ON OTHER METALS REQUESTED BY THE PERMIT WRITER.											

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Warrensburg West WWTP	MO- 0055905	# 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	<470	g	<50	ug/l	<156	g	1	EPA 624	ML
ACRYLONITRILE	<50	ug/l	<470	g	<50	ug/l	<156	g	1	EPA 624	ML
BENZENE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
BROMOFORM	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
CARBON TETRACHLORIDE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
CHLOROBENZENE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
CHLORODIBROMO-METHANE	"note"										
CHLOROETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
2-CHLORO-ETHYLVINYL ETHER	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
CHLOROFORM	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
DICHLOROBROMO-METHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
1,1-DICHLORO-ETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
1,2-DICHLORO-ETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
TRANS-1,2-DICHLOROETHYLENE	<20	ug/l	<188	g	<5.0	ug/l	<62	g	1	EPA 624	ML
1,1-DICHLORO-ETHYLENE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
1,2-DICHLORO-PROPANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
1,3-DICHLORO-PROPYLENE	"note"										
ETHYLBENZENE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
METHYL BROMIDE	"note"										
METHYL CHLORIDE	"note"										
METHYLENE CHLORIDE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
1,1,2,2-TETRA-CHLOROETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
TETRACHLORO-ETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
TOLUENE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
3,4-BENZO-FLUORANTHENE	"note"										
BENZO(GH) PHERYLENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
BENZO(K) FLUORANTHENE	<10	ug/l	<94	g	<10	ug/l	<31	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	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
BIS (2-CHLOROETHYL) – ETHER	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
BIS (2-ETHYLHEXYL) PHTHALATE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
4-BROMOPHENYL PHENYL ETHER	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
BUTYL BENZYL PHTHALATE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
2-CHLORONAPH-THALENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
4-CHLORPHENYL PHENYL ETHER	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
CHRYSENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
DI-N-BUTYL PHTHALATE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
DEBENZO (A,H) ANTHRACENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
1,2-DICHLORO-BENZENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
1,3-DICHLORO-BENZENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
1,4-DICHLORO-BENZENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
3,3-DICHLORO-BENZIDINE	<20	ug/l	<188	g	<20	ug/l	<62	g	1	EPA 625	ML
DIETHYL PHTHALATE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
DIMETHYL PHTHALATE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
2,4-DINITRO-TOLUENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
2,6-DINITRO-TOLUENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
1,2-DIPHENYL-HYDRAZINE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
1,1,1-TRICHLORO-ETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
1,1,2-TRICHLORO-ETHANE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
TRICHLORETHYLENE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	g	1	EPA 624	ML
VINYL CHLORIDE	<5.0	ug/l	<47	g	<5.0	ug/l	<16	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											

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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		
ACID-EXTRACTABLE COMPOUNDS											
P-CHLORO-M-CRESOL	"note"										
2-CHLOROPHENOL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
2,4-DICHLOROPHENOL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
2,4-DIMETHYLPHENOL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
4,6-DINITRO-O-CRESOL	"note"										
2,4-DINITROPHENOL	<50	ug/l	<469	g	<50	ug/l	<156	g	1	EPA 625	ML
2-NITROPHENOL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
4-NITROPHENOL	<50	ug/l	<469	g	<50	ug/l	<156	g	1	EPA 625	ML
PENTACHLOROPHENOL	<50	ug/l	<469	g	<50	ug/l	<156	g	1	EPA 625	ML
PHENOL	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
2,4,6-TRICHLOROPHENOL	<50	ug/l	<469	g	<50	ug/l	<156	g	1	EPA 625	ML
USE THIS SPACE (OR A SEPARATE SHEET) TO PROVIDE INFORMATION ON OTHER ACID-EXTRACTABLE COMPOUNDS REQUESTED BY THE PERMIT WRITER.											

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Warrensburg West WWTP	MO- 0055905	# 001

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	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
ACENAPHTHYLENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
ANTHRACENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
BENZIDINE	<80	ug/l	<751	g	<80	ug/l	<249	g	1	EPA 625	ML
BENZO(A)ANTHRACENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
BENZO(A)PYRENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
FLUORANTHENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
FLUORENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
HEXACHLOROBENZENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
HEXACHLOROCYCLO-PENTADIENE	<50	ug/l	<469	g	<50	ug/l	<156	g	1	EPA 625	ML
HEXACHLOROETHANE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
INDENO (1,2,3-CD) PYRENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
ISOPHORONE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
NAPHTHALENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
NITROBENZENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
N-NITROSODI-PROPYLAMINE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
N-NITROSODI-METHYLAMINE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
N-NITROSODI-PHENYLAMINE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
PHENANTHRENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
PYRENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
1,2,4-TRICHLOROBENZENE	<10	ug/l	<94	g	<10	ug/l	<31	g	1	EPA 625	ML
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.

MO 780-1805 (09-08)

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.		
FACILITY NAME Warrensburg West WWTP	PERMIT NO. MO- 0055905	OUTFALL NO. # 001

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

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	2ND MOST RECENT	3RD MOST RECENT
A. TEST INFORMATION			
TEST NUMBER	1206047	1106076-01	1006057-02
TEST SPECIES AND TEST METHOD NUMBER	EPA-821-R-02-012	EPA-821-R-02-012EPA-821	EPA-821-R-02-012
AGE AT INITIATION OF TEST	<24 hrs & 9 days	<24 hrs & 10 days	<24 hurs & 12 days
OUTFALL NUMBER	001	001	001
DATES SAMPLE COLLECTED	6-5-12	6-6-11	6-8-10
DATE TEST STARTED	6-6-12	6-8-11	6-9-10
DURATION	48 hrs / 48 hrs	48 hrs / 48 hrs	48 hrs / 48 hrs
B. GIVE TOXICITY TEST METHODS FOLLOWED			
MANUAL TITLE	Methods for Measuring Acut	Methods for Measuring Acut	Methods for Measuring Acut
EDITION NUMBER AND YEAR OF PUBLICATION	5th Oct. 2002	5th Oct. 2002	5th Oct. 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	☐	☐	☑
AFTER DISINFECTION	☑	☑	☐
AFTER DECHLORINATION	☐	☐	☐
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	☐	☐	☐
ACUTE TOXICITY	☑	☑	☑
G. PROVIDE THE TYPE OF TEST PERFORMED			
STATIC	☑	☑	☑
STATIC STATIC-RENEWAL	☐	☐	☐
FLOW-THROUGH	☐	☐	☐
H. SOURCE OF DILUTION WATER. IF LABORATORY WATER, SPECIFY TYPE; IF RECEIVING WATER, SPECIFY SOURCE			
LABORATORY WATER			X
RECEIVING WATER	X	X	

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Warrensburg West WWTP	MO- 0055905	# 001

PART E – TOXICITY TESTING DATA (CONTINUED)

50.1 WHOLE EFFLUENT TOXICITY TESTS DATA (CONTINUED)

	MOST RECENT	2ND MOST RECENT	3RD 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	7.80	7.63	7.51
SALINITY	3.28	8.57	3.29
TEMPERATURE	25.0	25.2	24.7
AMMONIA	N/A	N/A	N/A
DISSOLVED OXYGEN	9.9	9.3	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.

MO 780-1805 (09-08)

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME	PERMIT NO.	OUTFALL NO.
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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?

☑ Yes ☐ 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	B. Number of CIUs
Zero (0)	Zero (0)

60.3 SIGNIFICANT INDUSTIRAL 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

NA

MAILING ADDRESS	CITY	STATE	ZIP

60.4 INDUSTRIAL PROCESSES

DESCRIBE ALL OF THE INDUSTRIAL PROCESSES THAT AFFECT OR CONTRIBUTE TO THE SIU's DISCHARGE.

NA

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)

NA

RAW MATERIAL(S)

NA

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.

gpd ☐ Continuous ☐ 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.

gpd ☐ Continuous ☐ Intermittent

60.7 PRETREATMENT STANDARDS

Indicate whether the SIU is subject to the following

A. Local Limits ☐ Yes ☐ No

B. Categorical Pretreatment Standards ☐ Yes ☐ No

If subject to categorical pretreatment standards, which category and subcategory?

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?

☐ Yes ☑ No If Yes, describe each episode

At this time Warrensburg West WWTP has zero (0) industries contributing to the influent flow.

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME	PERMIT NO.	OUTFALL NO.
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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

REMEDIATION 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):

N/A

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.

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MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL.

FACILITY NAME	PERMIT NO.	OUTFALL NO.
NA	MO- NA	NA

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?

☐ Rainfall ☐ CSO Pollutant Concentrations ☐ CSO ☐ CSO Flow Volume ☐ 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 ☐ Actual ☐ Approximate

B. Give the Average Duration Per CSO Event _____ Hours ☐ Actual ☐ Approximate

C. Give the Average Volume Per CSO Event _____ Million Gallons ☐ Actual ☐ 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.

MO 780-1805 (09-08)

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	Annual fee/Design flow
$3,000.....30,000 gpd to1 mgd	$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.

Warrensburg
MISSOURI

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: **West WWTP MO-0055905**
        - Reason for the permit modification:
            1. Modification of Copper, Total Recoverable limits
            2. Modification of the facility description. The existing permit was issued before the plant upgrade was substantially completed.
            3. Modification of design sludge production. The new design sludge production is equal to a population equivalent 15,000 or 1.5 MGD= 240 dry ton /year (same as the City's East WWTP).

1.1 Self Explanatory

1.2 Included is the $200.00 permit modification fee. Check # 083129

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. Additional Facility Information

7.1 Brief Description of facility: This has been updated.

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 rate.

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 = 1,800.
- 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 West 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 West Fact sheet dated 2-20-2009 page # 8 a WLA study was performed by EPA in 1990. 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 City Request a permit modification concerning Sludge Production due to the fact that after the plant upgrade "substantial completion on December 8, 2010" the West WWTP design population equivalent has been raised to 15,000. Also in the near future the lagoon flow of approximately 200,000 gpd will be diverted to the West WWTP for proper treatment.

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
B. Self Explanatory
C. Self Explanatory
D. Self Explanatory
E. Self Explanatory
- Self Explanatory
- Self Explanatory
- Self Explanatory
- 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 Rate 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

- Self Explanatory

60.2 Self Explanatory (A and B)
60.3 Self Explanatory
60.4 Self Explanatory
60.5 Self Explanatory
60.6 Self Explanatory
60.7 Self Explanatory
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

Warrensburg
MISSOURI

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

RE: West WWTP, MO-0055905
NPDES Permit Modification

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 Copper, Total Recoverable limits at the West Wastewater Treatment Plant MO-0055905.

With the new permit limits issued on December 4, 2011 the City's West 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 Postoak Creek. The downstream water hardness of Postoak Creek indicates that the downstream water hardness values are higher than the default values used by the state in determining the Copper, 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 Postoak Creek and Bear Creek with a request to forward one (1) copy to Mr. Gateley with MDNR WPP.

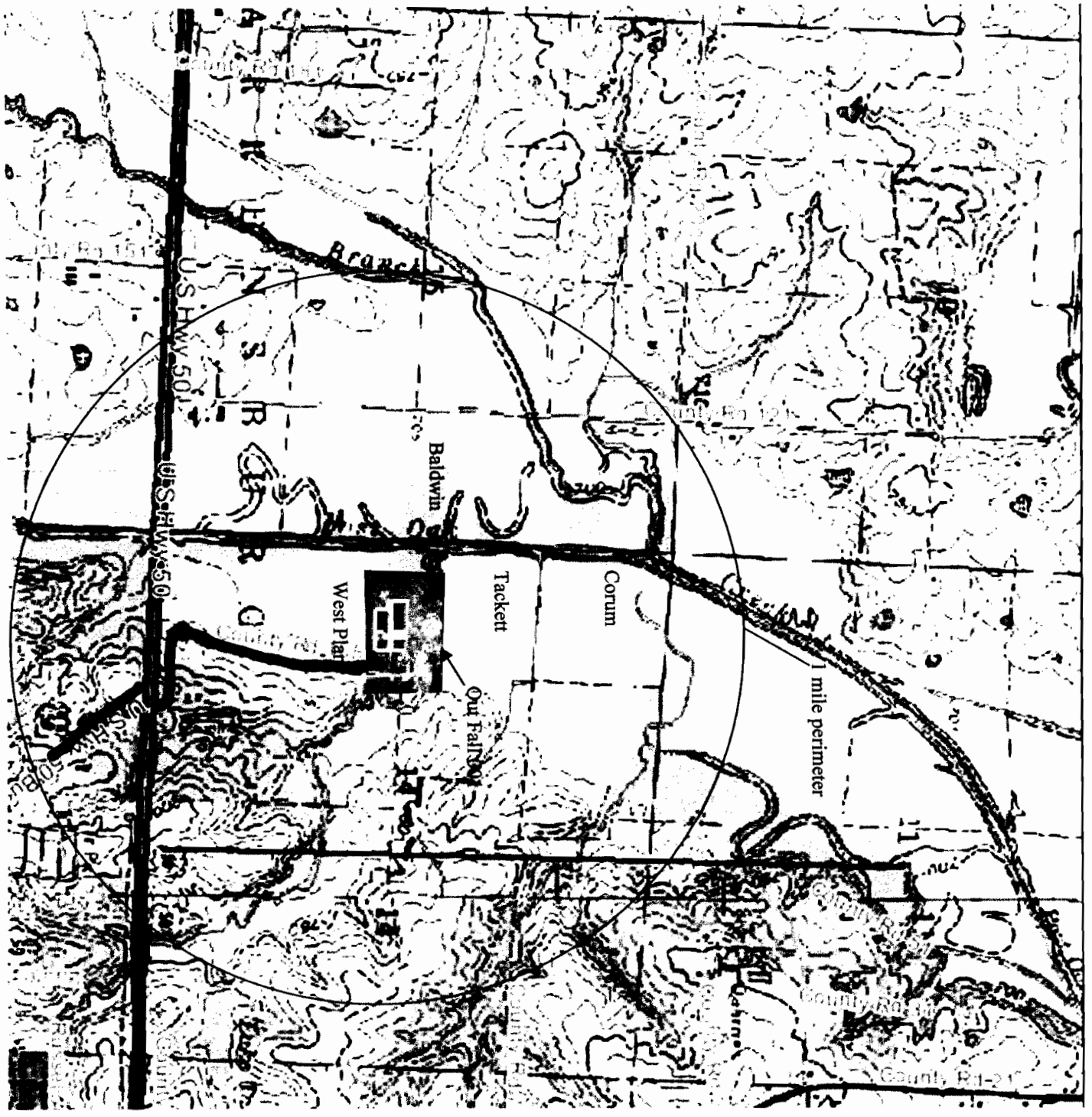
As requested by Ms. Clark with the Missouri Department of Natural Resources, the City of Warrensburg has filled out a permit modification form (B-2) concerning the West WWTP.

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

B-2 7.2 a. Topo map. Area extending at least one mile.



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

H. Smith and Margaret Corum
213 N.W. 121 Road
Warrensburg, Mo 64093

Dallas S and Janet M Corum
10015 Shadowcrest
Waco TX. 76710

Michael and Deborah Haller
181 NE 51ST RD
Warrensburg, Mo 64093

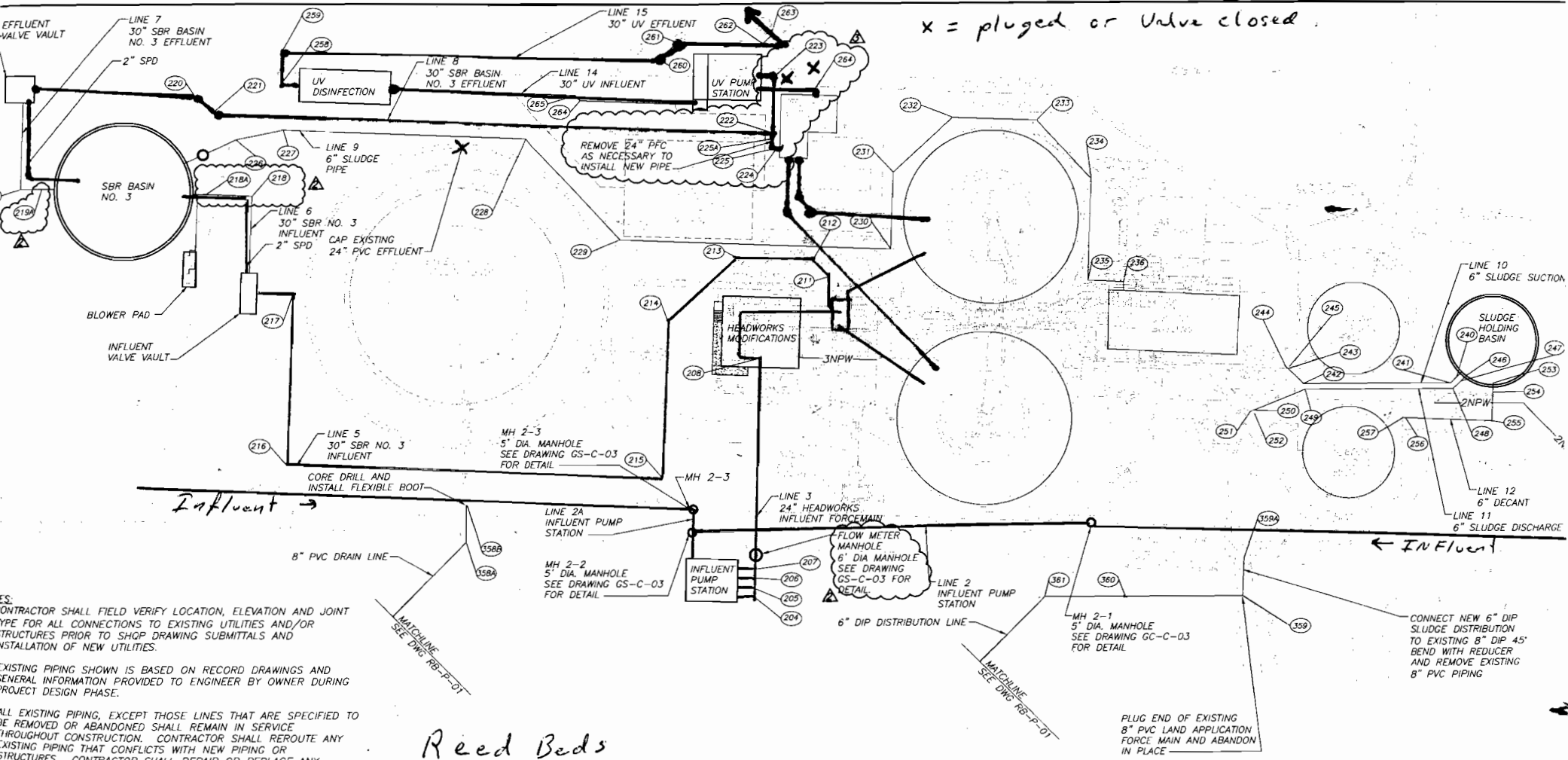
Marjorie Tackett
53 NW 105 RD
Warrensburg, Mo 64093

David Tackett
118 NW 21ST RD or 57 N.W. 105 RD
Warrensburg MO 64093

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

UNKNOWN Tributary B-2 7.2 C

x = pluged or Valve closed.



Reed Beds

X

ES:

ONTRACTOR SHALL FIELD VERIFY LOCATION, ELEVATION AND JOINT YPE FOR ALL CONNECTIONS TO EXISTING UTILITIES AND/OR TRUCTURES PRIOR TO SHOP DRAWING SUBMITTALS AND NSTALLATION OF NEW UTILITIES.

XISTING PIPING SHOWN IS BASED ON RECORD DRAWINGS AND ENERAL INFORMATION PROVIDED TO ENGINEER BY OWNER DURING ROJECT DESIGN PHASE.

LL EXISTING PIPING, EXCEPT THOSE LINES THAT ARE SPECIFIED TO E REMOVED OR ABANDONED SHALL REMAIN IN SERVICE HROUGHOUT CONSTRUCTION. CONTRACTOR SHALL REROUTE ANY XISTING PIPING THAT CONFLICTS WITH NEW PIPING OR TRUCTURES. CONTRACTOR SHALL REPAIR OR REPLACE ANY XISTING PIPING OR PIPING APPURTENANCES DAMAGED DURING ONSTRUCTION.

LL NEW PIPING JOINTS AND FITTINGS SHOWN ON THIS DRAWING SHALL BE RESTRAINED.

CONTRACTOR SHALL BE REQUIRED TO SUBMIT AND RECEIVE APPROVAL ON A SITE EROSION CONTROL PLAN PRIOR TO BEGINNING CONSTRUCTION.

VALVES NOT SHOWN ON THIS DRAWING ARE INDICATED ON INDIVIDUAL FACILITY PROCESS DRAWINGS.

LL FLEXIBLE JOINTS FOR PIPES ENTERING OR EXITING STRUCTURES SHALL BE LOCATED A MAXIMUM OF 5 FEET FROM STRUCTURE EDGE OF SLAB.

REFERENCE DRAWING SP-C-16 FOR PIPING COORDINATE LISTS.

REFERENCE DRAWING RB-P-01 FOR REEDBED PIPING AND COORDINATES

WING FILE NAME: 305-C-03-Add#2.dwg		DOCUMENT NO.:	USER I.D.:
E LAST SAVED: -24-08	PLOT SCALE: 1:1	DATE/TIME PLOTTED: --	
S ATTACHED: --	DESIGNED BY: ABB	DRAWN BY: RAC	CHECKED BY: PRY
CHED FILE NAMES:			

No.	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

Warrensburg, Missouri

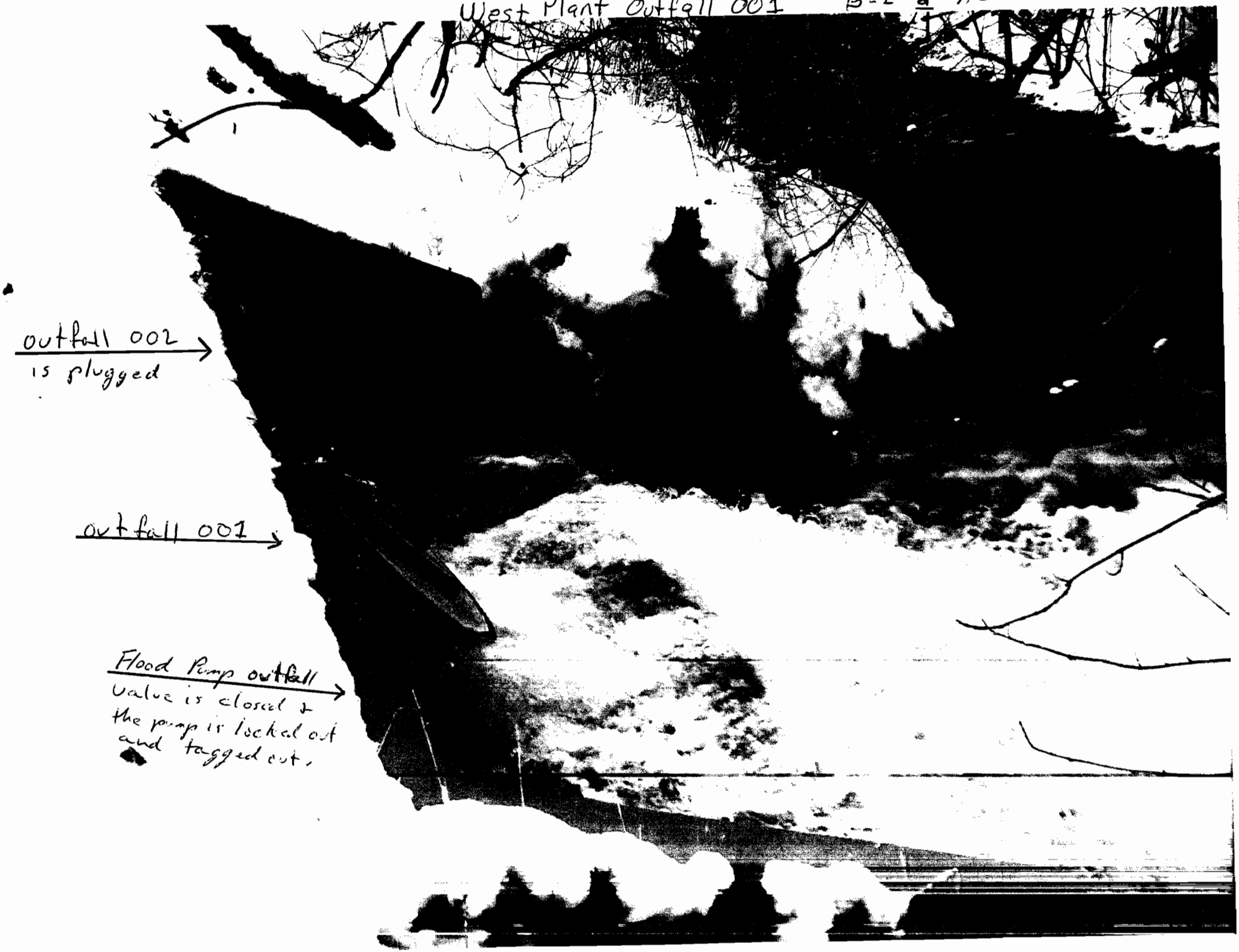
STATE OF MISSOURI PATRICK RAY YOUNG E-29082 REGISTERED PROFESSIONAL ENGINEER 11-12-08

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

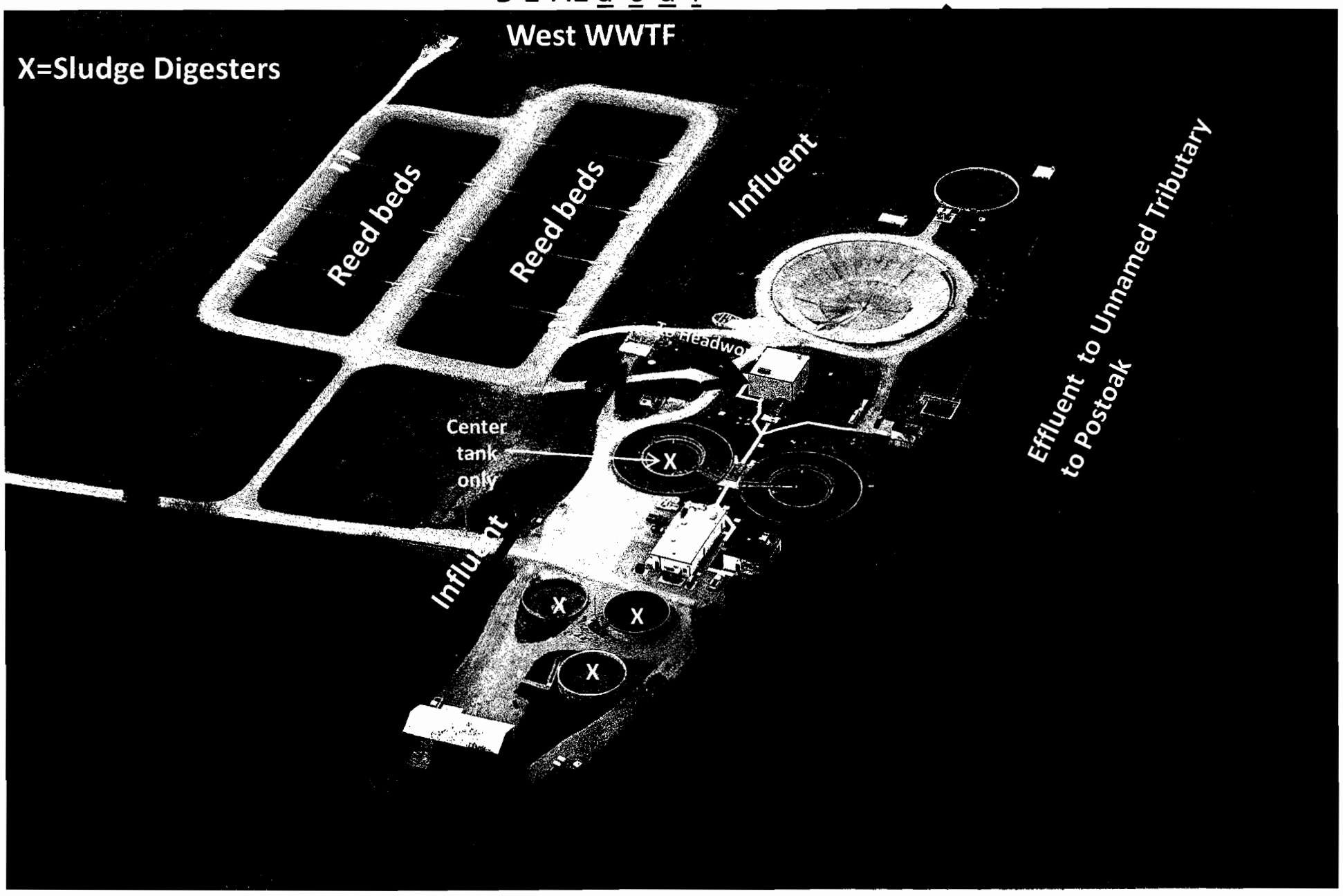
CITY OF WARRENSBURG, MIS
WASTEWATER FACILITY IMPRO
CONTRACT T-4, T-5, & T-

WEST TREATMENT PLAN
PIPING PLAN

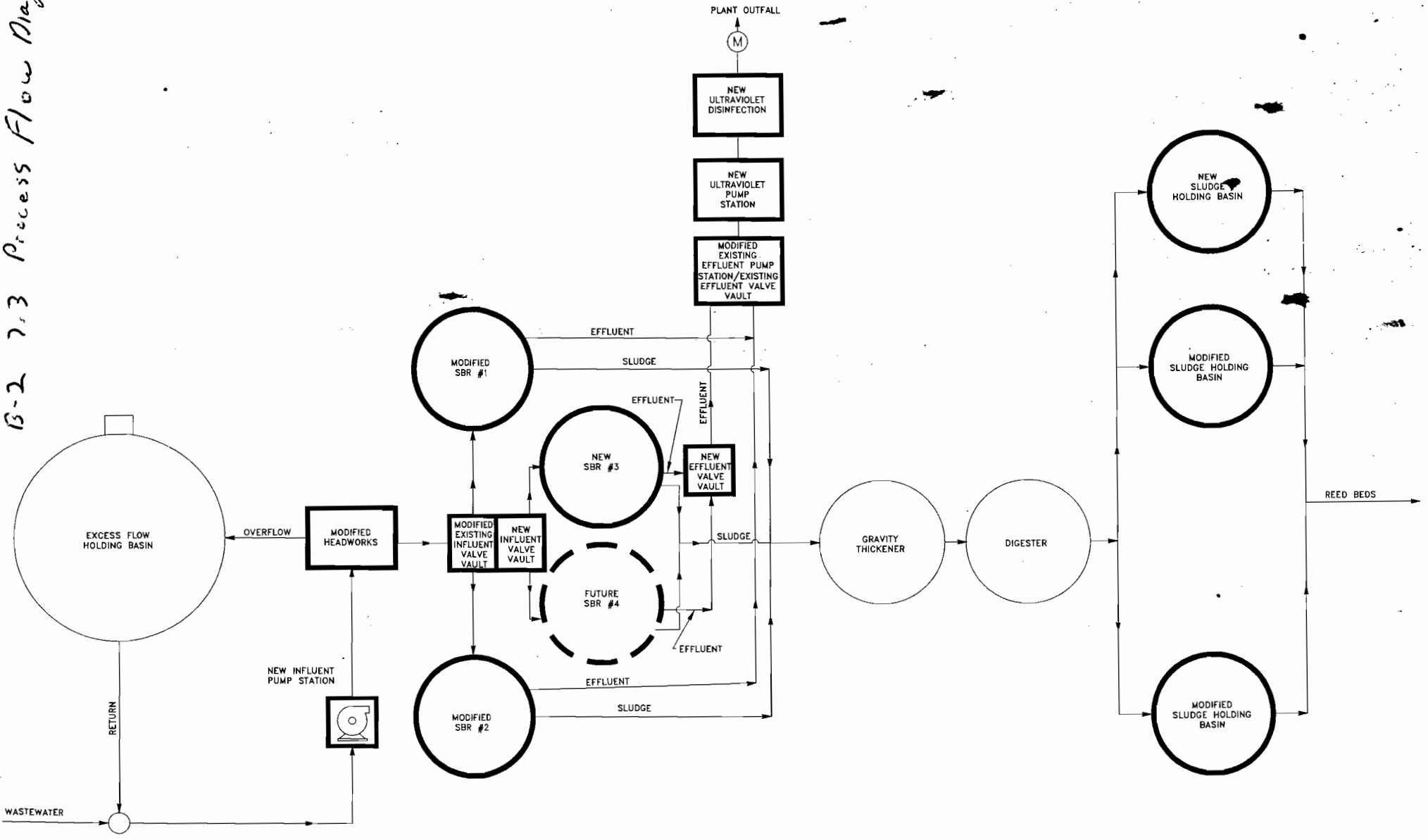
West Plant Outfall 001 B-2 d 7.2



B-2 7.2 a c d f


West WWTF
X=Sludge Digesters
Reed beds
Reed beds
Influent
Effluent to Unnamed Tributary
to Postoak
Center
tank
only
X
X
X
X

B-2 2.3 Process Flow Diagram



NAME: -G05.DWG	DOCUMENT NO.:	USER I.D.:
ED: PLOT SCALE: 1:1	DATE/TIME PLOTTED: —	
: DESIGNED BY: ABB	DRAWN BY: REP, PAC	CHECKED BY: PRY
NAMES:		

No.	DATE	BY	REVISION
1	09/23/08	ABB	DRAWING RE-ISSUED PER ADDENDUM

Warrensburg, Missouri

PATRICK RAY YOUNG — E-29062 — STATE OF MISSOURI — REGISTERED PROFESSIONAL ENGINEER

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

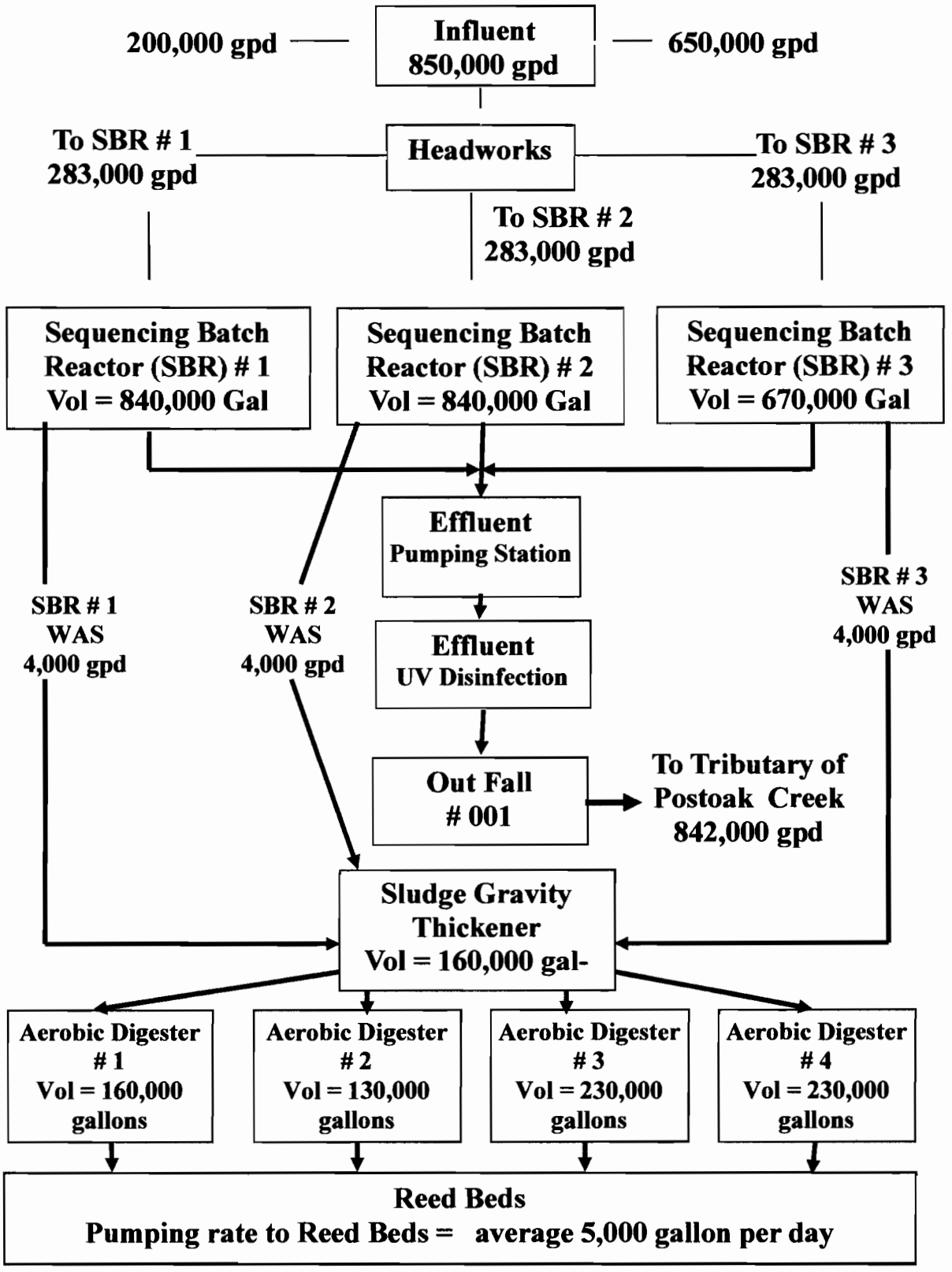
CITY OF WARRENSBURG, MISSOURI
WASTEWATER FACILITY IMPROVEMENTS
CONTRACT T-4, T-5, & T-6

EAST AND WEST TREATMENT PLANTS
PROCESS FLOW DIAGRAM

13-2 7.3

Daily Avg Flow Rates

Flow Diagram **Warrensburg West WWTF** **MO-0055905**



2/26/2013

B-2 7.13

C.V. = 0.6, n = 4

The following assumptions were used for the input. These were in part derived from the WLA study performed by EPA in 1990 (1):

	Upstream		Effluent	
	Summer	Winter	Summer	Winter
Flow (cfs)	0.1	0.1	1.36	1.36
Total BOD_u (mg/l)	1.2	1.2	9.59	15.98
DO (mg/l)	6	6	5	5
Temperature (°C)	26	6	26	6

Instream Conditions		
	Summer	Winter
Velocity (fps)	0.11	0.11
DO Saturation	9.608	9.608
BOD Decay (K_d)	0.923	0.923
Adjusted K_d	1.21586	0.48523
Reaeration (K_2)	1.649	1.649
Adjusted K_2	1.90	1.18
$\theta(K_d) = 1.047$; $\theta(K_2) = 1.024$		

DMR data from the last five years indicate that the limits indicated above will not be achievable. From January, 1998 until August, 2002, the following results were obtained for $CBOD_5$ in the effluent:

	Average	Maximum	Minimum	95th percentile
May 1–Oct 31	5.84	11	3	10.6
Nov 1–Apr 30	8.95	19	0	15.95

Using the 95th percentile as a Waste Load Allocation yields the following results:

	WLA	LTA	MDL	AML
May 1–Oct 31	10.6	6.8	14.5	8.1
Nov 1–Apr 30	15.95	10.3	21.9	12.2

CV = 0.6; n = 30

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

In accordance with the 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. Furthermore, WET testing is a means by which the department determines that [10 CSR 20-7.031(3)(D, F, & G)] are being met by the permitted facility. In addition to justification for the WET testing, WET tests are required under [10 CSR 20-6.010(8)(A)4] to be performed by specialists who are properly trained in conducting the test according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136]. WET test will be required by all 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.

West Plant MO-0055905 **B-2 7. 14**

2008
March 19,.....Weekly average TSS exceedance
May 14,.....CBOD exceedance
June ..... Second Quarter cooper exceedance
June 30,.....Failure to report Hazardous Waste Generator Requirements
July 16, ...Incomplete reporting concerning in stream sampling

2009
March 10, ...outfall 002 TSS exceedance

2010
February 23,.....TSS Percent % removal exceedance

2011
December ..... Fourth quarter copper was over monthly average limit

2012
July..... Third quarter copper was over monthly average and daily maximum

2013
January ..... First quarter copper was over monthly average and daily maximum

Warrensburg
MISSOURI
Public Works

B-2
Part A 9.6 + 9.7

Warrensburg West WWTP Annual 2012 Biosolids Report

Reporting Period: 2012 (YEAR)

Permit #: MO- 0055905

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

Facility Name:
Warrensburg West WWTP
75 NW 50 HWY.
Johnson Co. Mo

RE:

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

In the fall of 2009 Warrensburg West WWTP constructed a new Reed Bed system in lieu of their current land application process. Soon after construction the West 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 West 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 West 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: / Description:
0381 / West WWTF Composite Effluent, 2-19-13, 9:00 am, 6489-6491
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

5451

Engineering Surveys & Services

BY:

Linda L. Adams

Linda L. Adams

ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORIES
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Date: **20 March 2013**
Lab Number: L9190

Project: City of Warrensburg

Location: Warrensburg, Missouri

Date Received: 21 February 2013

Sample No: /
Description:
0381 / West WWTF Composite Effluent, 2-19-13, 9:00 am, 6489-6491
0382 / East WWTF Composite Effluent, 2-19-13, 1:00 pm, 6492-6494

TEST RESULTS:

Parameter:	0381	0382	**Units**	Method
Antimony	**<50**	**<50**	ug/l	6020
Arsenic	**<5**	**<5**	ug/l	6020
Beryllium	**<50**	**<50**	ug/l	6020
Cadmium	**<5**	**<5**	ug/l	6020
Chromium	**<10**	**<10**	ug/l	6020
Copper	**19**	**11**	ug/l	6020
Lead	**<5**	**<5**	ug/l	6020
Mercury	**<0.5**	**<0.5**	ug/l	3112 B
Nickel	**<10**	**<10**	ug/l	6020
Selenium	**<5**	**<5**	ug/l	6020
Silver	**<3**	**<3**	ug/l	6020
Thallium	**<100**	**<100**	ug/l	6020
Zinc	**47**	**42**	ug/l	6020
Digestion	**Yes**	**Yes**		

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

5450

Engineering Surveys & Services

BY:

Linda L. Adams

Linda L. Adams

ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORIES
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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: / Description:
0494 / West Effluent Composite, 2-28-13, 11:00 am, 6496
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

5459

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BY:

Linda L. Adams

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ENGINEERING SURVEYS AND SERVICES
TESTING LABORATORIES
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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: / Description:
0709 / West Effluent, 3-5-13, 8:00 a.m., 6500
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

5460

Engineering Surveys & Services

BY: Linda L. Adams

Linda L. Adams

PDC Laboratories, Inc.
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(309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689

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: **3022770-01**

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
General Chemistry - PIA						
Phenolics	< 0.0050 mg/L		02/26/13 07:39	02/27/13 15:06	lgbrs	EPA 420.4 - QC 10-210-00-1A
Semivolatile Organics - PIA						
1,2,4-Trichlorobenzene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
1,2-Dichlorobenzene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
1,2-Diphenylhydrazine	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
1,3-Dichlorobenzene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
1,4-Dichlorobenzene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2,4,6-Trichlorophenol	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2,4-Dichlorophenol	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2,4-Dimethylphenol	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2,4-Dinitrophenol	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2,4-Dinitrotoluene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2,6-Dinitrotoluene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2-Chloronaphthalene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2-Chlorophenol	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
2-Nitrophenol	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
3,3'-Dichlorobenzidine	< 20 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
4,6-Dinitro-2-methylphenol	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
4-Bromophenylphenyl ether	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
4-Chloro-3-methylphenol	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
4-Chlorophenylphenyl ether	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
4-Nitrophenol	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Acenaphthene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Acenaphthylene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Anthracene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Benzidine	< 80 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Benzo(a)anthracene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Benzo(a)pyrene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Benzo(b)fluoranthene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Benzo(g,h,i)perylene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625

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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: **3022770-01**

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
Semivolatile Organics - PIA						
Benzo(k)fluoranthene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Bis(2-chloroethoxy) methane	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Bis(2-chloroethyl) ether	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Bis(2-chloroisopropyl) ether	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Bis(2-ethylhexyl) phthalate	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Butyl benzyl phthalate	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Chrysene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Dibenzo(a,h)anthracene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Diethyl phthalate	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Dimethyl phthalate	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Di-n-butyl phthalate	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Di-n-octyl phthalate	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Dioxin Screen	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Fluoranthene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Fluorene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Hexachlorobenzene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Hexachlorobutadiene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Hexachlorocyclopentadiene	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Hexachloroethane	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Indeno(1,2,3-cd)pyrene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Isophorone	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Naphthalene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Nitrobenzene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
N-Nitrosodimethylamine	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
N-Nitrosodi-n-propylamine	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
N-Nitrosodiphenylamine	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Pentachlorophenol	< 50 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Phenanthrene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Phenol	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625
Pyrene	< 10 ug/L		02/25/13 09:19	03/06/13 17:44	SNS	EPA 625

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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: **3022770-01**

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
Volatile Organics - PIA						
1,1,1-Trichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,1,2,2-Tetrachloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,1,2-Trichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,1-Dichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,1-Dichloroethene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,2-Dichlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,2-Dichloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Surrogate: 1,2-Dichloroethane-d4	*94 % 65-131*			*02/27/13 20:27*	*JMB*	*EPA 624*
1,2-Dichloropropane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,3-Dichlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
1,4-Dichlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
2-Chloroethylvinyl ether	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Acrolein	< 50 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Acrylonitrile	< 50 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Benzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Bromodichloromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Surrogate: Bromofluorobenzene	*103 % 57.3-163*			*02/27/13 20:27*	*JMB*	*EPA 624*
Bromoform	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Bromomethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Carbon tetrachloride	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Chlorobenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Chloroethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Chloroform	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Chloromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
cis-1,3-Dichloropropene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Dibromochloromethane	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Ethylbenzene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Methylene chloride	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Tetrachloroethene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Toluene	< 5.0 ug/L		02/27/13 00:00	02/27/13 20:27	JMB	EPA 624
Surrogate: Toluene-d8	*101 % 67.5-139*			*02/27/13 20:27*	*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: **3022770-01**
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
Volatile Organics - PIA						
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
General Chemistry - PIA						
Phenolics	< 0.0050 mg/L		02/26/13 07:39	02/27/13 15:08	lgbrs	EPA 420.4 - QC 10-210-00-1A
Semivolatile Organics - PIA						
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

6504 6505 + 6507
6506

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: 05 April 2013
Lab Number: L9190

Project: City of Warrensburg

Location: Warrensburg, Missouri

Date Received: 29 March 2013

Sample No: / Description:
1236 / East WWTP, Effluent, 3-28-13, 9:00 a.m., 6504, 6505
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	4500-Cl G
Total Dissolved Solids	**607**	**517**	mg/l	1.0	2540 C
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 -05'00'

Linda L. Adams

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